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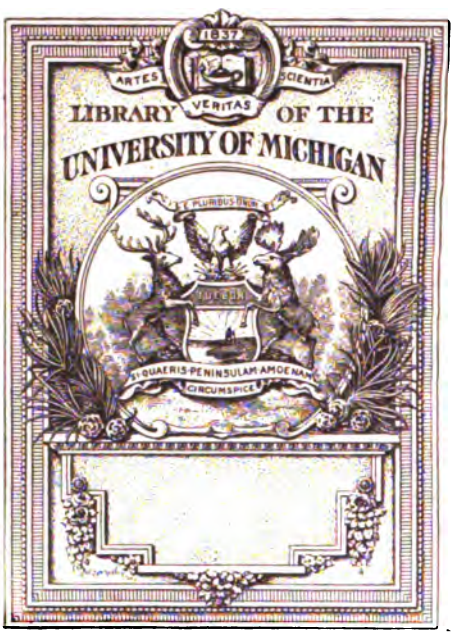


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# OFFICIAL REGISTER
OF
# HARVARD UNIVERSITY

VOLUME V APRIL 15, 1908 NUMBER 7

## REPORTS
OF
## THE PRESIDENT AND THE TREASURER
OF
## HARVARD COLLEGE

## 1906–07

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CAMBRIDGE, MASS.

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# REPORTS

OF

# THE PRESIDENT AND THE TREASURER

OF

# HARVARD COLLEGE

## 1906–07

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1908

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# CONTENTS.


| | Pages |
|---|---|
| PRESIDENT'S REPORT | 5–56 |
| REPORTS OF DEPARTMENTS:— | |
| The Faculty of Arts and Sciences | 57–100 |
| The College | 101–110 |
| The Lawrence Scientific School | 111–116 |
| Athletic Sports | 117–125 |
| The Graduate School | 126–143 |
| The Divinity School | 144–151 |
| The Law School | 152–156 |
| The Faculty of Medicine | 157, 158 |
| The Medical School | 159–182 |
| The Dental School | 183–188 |
| The Bussey Institution | 189 |
| The Library | 190–220 |
| The Gray Herbarium | 221–226 |
| The Botanic Garden | 227–230 |
| The Arnold Arboretum | 231–233 |
| The Chemical Laboratory | 234–241 |
| The Jefferson Physical Laboratory | 242–244 |
| The Division of Engineering | 245–249 |
| The Psychological Laboratory | 250–252 |
| The Observatory | 253–261 |
| The Museum of Comparative Zoölogy | 262–266 |
| The Zoölogical Laboratory | 267–272 |
| The Department of Geology and Geography | 273–283 |
| The Division of Mining and Metallurgy | 284–289 |
| The Mineralogical Museum and Laboratories of Mineralogy and Petrography | 290, 291 |
| The Peabody Museum of American Archaeology and Ethnology | 292–303 |
| The Semitic Museum | 304–306 |
| The Fogg Art Museum | 307–310 |
| The Germanic Museum | 311–314 |
| Collection of Classical Antiquities | 315, 316 |
| Summer Courses of Instruction | 317–331 |
| Radcliffe College | 332–336 |
| APPENDIX | 337–365 |
| INDEX | 366–370 |

| | |
|---|---|
| TREASURER'S STATEMENT | 1–148 |


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# PRESIDENT'S REPORT FOR 1906-07.

To the Board of Overseers: —

The President of the University has the honor to submit the following report for the academic year 1906–07, — namely, from September 27, 1906, to September 26, 1907.

At a special meeting of the Board of Overseers held on April 10, 1907, a vote was passed extending the right to vote for Overseers as follows: —

*Voted*, That this Board hereby determines that the degrees conferred by the Governing Boards of the University, upon the recommendation of the Faculty of Arts and Sciences, upon the graduates of the Lawrence Scientific School, of the Graduate School of Arts and Sciences, and of the Graduate School of Applied Science, and the degree of Bachelor of Science conferred after residence in Harvard College, shall entitle the recipients thereof to vote for Overseers to the same extent and under the same restrictions to and under which recipients of the degree of Bachelor of Arts in said College may now so vote.

At a meeting of the President and Fellows on April 29, 1907, the same vote was adopted in concurrence with the Board of Overseers. This action was taken under an act of the Massachusetts Legislature approved March 27, 1902, which provided that the President and Fellows of Harvard College, and the Board of Overseers of said College, may determine from time to time by concurrent vote "whether any, and if any, what degrees issued by said College other than those mentioned in the first Section of Chapter 173 of the Acts of the year 1865 shall entitle the recipients thereof to vote for Overseers to the same extent and under the same restrictions to and under which recipients of the degree of Bachelor of Arts from said College may now so vote." The restrictions referred to exclude from the suffrage members of the Corporation and officers of government or instruction, and prevent Bachelors of Arts from voting before the fifth annual election after graduation. These restrictions, like the exclusion

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from the suffrage of graduates of the three oldest professional schools, were natural enough in 1865, but are quite inconsistent with the present organization and spirit of the University, and with the present feelings and modes of action in all Harvard Classes, Clubs, and Associations.

In April, 1906, a joint committee of the Corporation and Board of Overseers was appointed, consisting of the President of the University, three members of the Corporation, and three members of the Board of Overseers, "to consider what changes are desirable in the organization and administration of the University, and to report thereon in twelve months from this date, if practicable." This committee made report to both Boards in March, 1907. They found that an undoubted improvement had been effected, since the committee was appointed, by the institution of the Resident Executive Board, which deals with a large number of administrative details that had before been carried through the President to the Corporation. It was the opinion of the majority of the committee that the President of the University does not need to be relieved of any function that he now performs; but that he ought to be relieved of details in many directions, and to have more assistance than he now has. They recommended that the Secretary to the Corporation should have an assistant, who should be a graduate of the College. This recommendation was carried into effect in June, 1907, by the appointment of Mr. Joseph Warren, A.B. 1897, LL.B. 1900. They reported that the Faculty of Arts and Sciences transacts its executive business much more effectively than formerly, and more effectively than any other Faculty in the University; and they approved the way in which the Faculty does its executive work through Deans, administrative boards, divisions, departments, and committees. They recommended that the chairmen of large divisions or departments be provided with more clerical assistance. This recommendation has been carried into effect. They encouraged subordinate boards and committees and Deans to take final action on all questions for the determination of which sound precedents had been settled, or which could be acted on under standing rules of the Corporation or the Faculty, or, in other words, they recommended that administrative discretion should be freely used by trusted officials

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and committees. They observed "that the changes or other improvements which your committee suggest are all natural outgrowths of present practices, or developments of measures already initiated." Mr. Charles Francis Adams, a member of the committee from the Board of Overseers, assented to the conclusions of the majority, so far as they went; but intimated "that, in his judgment, far more comprehensive measures of reform would be desirable." Mr. James J. Storrow, another member on behalf of the Overseers, thought "that the changes recommended in the majority report are probably in the right direction; but that they still leave the administration of the University in a cumbersome and somewhat ineffective condition." The report will be found printed in full in the Appendix, p. 337.

During the summer of 1906 Harvard University was duly notified that the Executive Committee of the Carnegie Foundation had placed the University on the list of institutions entitled to share in the benefits of the Foundation; so that the Carnegie Retiring Allowances would become a part of the regular academic compensation of its Professors. This action on the part of the Carnegie Foundation was duly acknowledged by the President and Fellows of Harvard College on the 6th of October, 1906, and the benefits of the Foundation were gratefully accepted. These benefits are of two kinds, one kind taking effect upon professors and their families; the other on the institutions of the higher education themselves. Although the Carnegie Retiring Allowances have only been available for about a year and a half, they have already been received by several retiring professors in Harvard University, and by two widows of professors who have died in office; and in every case the pension was welcomed as a pecuniary recognition of long and faithful services. The Harvard system of retiring allowances made no provision for widows, and widows are not entitled by right to any pension under the Carnegie rules; but the practice has already been established of granting to a widow, in clear cases of need, one-half the pension to which her husband would have been entitled, this grant being made by a special vote of the Executive Committee. As a resource for a widow in cases of sudden disability or death, the possibility of a Carnegie pension is already a great comfort to

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men of small means who give their lives to the higher education. It does not relieve men who can get their lives insured from the duty of so doing; but there are some men with families who are unable to procure life insurance on any terms, and others whose income so little exceeds their necessary family expenses that they cannot pay the premiums on any adequate amount of insurance. The relief from the apprehension of premature disability or senility on the part of men who have adopted a calling which precludes the expectation of large earnings is also very great. The beneficent effects of the Carnegie Foundation on the institutions of higher education themselves are already plain. The Foundation makes possible the retirement in a considerate and satisfactory way of old teachers whose usefulness is impaired, and so keeps Faculties fresh and vigorous in their membership; and it attracts to college and university service capable young men who were formerly deterred by natural apprehensions concerning the means of properly supporting themselves and their families. Moreover, trustees need no longer be afraid to call to their service elderly men — men fifty years of age, for example. They used to feel that such a man could give them only ten or fifteen years of first-rate service, to be followed, in all probability, by a formidable number of years of impaired service. Since the Carnegie pensions, they need no longer apprehend the unprofitable appendix to the years of distinguished service. The Foundation, in its search for the means of executing the trust, is giving the country trustworthy means of discriminating between schools and colleges, and between colleges and universities. It is also contributing to raising the standard of admission to college and to mitigating denominationalism in education.

By the desire of Mrs. William Belden Noble, the founder of the William Belden Noble Lectures, the terms of that Foundation were reconsidered by the President and Fellows, and were adopted in a somewhat new form on November 26, 1906. The new terms will be found printed in full in the Appendix, p. 340. The chief change in the terms is the transfer to the President and Fellows of Harvard College of the appointment of lecturers on this Foundation. Heretofore the lecturers have been selected by a body of private persons and officials named by the founder, and called

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the Trustees. The Fund having been all the time in the charge of the President and Fellows, and the method of selection having proved somewhat cumbrous and uncertain, the founder desired to place the entire charge of the Foundation and its work in the hands of the President and Fellows. In recasting the original terms she proposed some other not material modifications and additions, to which the President and Fellows readily assented, being sincerely desirous to perfect this touching memorial of an unfinished life.

On the death of Professor Nathaniel Southgate Shaler in April, 1906, more than 760 alumni of Harvard University united in contributing a sum of $30,500 to establish the "Shaler Memorial Fund" in commemoration of his long service and of the great affection in which he was held by his many students and friends. The subscribers to this Fund left the designation of its uses to a committee consisting of Robert Winsor, William M. Davis, and Edward W. Atkinson; and on the 11th of March, 1907, the President and Fellows received from this committee a paper declaring the objects of the Fund as follows: First, to put up a memorial tablet in the Geological section of the University Museum, and secondly, to apply the income of the balance of the Fund to original researches and the publication of the results of research, under the direction, and for the benefit, of the Division of Geology. The subject and the field of research are to be approved by the Division Committee, and the persons to undertake researches are to be nominated by the same Committee. Any work or journey supported in whole or in part from the Fund is to be carried on under the name "Shaler Memorial Research" or "Shaler Memorial Expedition." The publications contemplated are to include the results of original research carried on with the income of the Fund, or independently of such aid, but in all cases must receive the approval of the Division Committee. Approved publications are to bear the general title, "Shaler Memorial Series." In accepting this gift, the President and Fellows recorded their satisfaction in the possession of such an enduring and fruitful memorial of Professor Shaler.

When the Medical School moved from its Boylston Street building to the new buildings on Longwood Avenue, James

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Skillen, who had long been the janitor of the Medical School, retired from the service of the School. He was in the service of the Massachusetts General Hospital from 1864 to 1877, and in that of the Medical School from 1877 to 1906. During these 42 years of continuous faithful duty in closely allied institutions, he made many friends among physicians, medical students, and patients, and these friends determined that some comfortable provision should be made for his declining years. On the 15th of January, 1907, a committee formed to secure an annuity for James Skillen and for Susan Skillen, his wife, forwarded to the Treasurer of the College $10,000 wherewith to establish the James Skillen Memorial Fund. It was understood that James Skillen is to receive an annuity of $800 during his life, that, in case of his death, Susan Skillen is to receive an annuity of $400 during the remainder of her life, and that on the death of both annuitants, the Fund is to become one of the permanent endowments of the Harvard Medical School. It was further understood that the capital of the Fund is not to be impaired, the Medical School paying any excess of the annuity above the income of the Fund. The President and Fellows voted to establish the James Skillen Memorial Fund on the above terms, and gave to the committee and the donors the thanks of the President and Fellows for their ultimate benefaction to the Medical School.

When the Executive Committee of the Alumni Association established offices at 50 State Street, Boston, and appointed Mr. Edgar H. Wells General Secretary, the President and Fellows coöperated with the Association by retaining Mr. Wells in the service of the University as a member of the Faculty and as Secretary for Appointments, by appointing him editor of the Quinquennial Catalogue, and by giving into his charge the preparation of a comprehensive address-list of all living former students of the University. Mr. Wells entered upon his duties on the 1st of May, 1907. For the preparation of the Quinquennial Catalogue he is to have the help, if he wishes it, of two persons, both of whom are to be paid by the University. The Alumni Association is to pay for the preparation of the new address-list of living men who have studied at Harvard University; but the University is to contribute $780 a year towards this cost. As

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Secretary for Appointments, Mr. Wells is to be paid by the University, and the members of the office-force for Appointments are also to be paid by the University. Mr. Wells retains his former office in University Hall, and uses also the Alumni office at 50 State Street, Boston.

The office of the Association in Boston will become a repository of information about the University, and about the Alumni, and will promote the formation of new Harvard Clubs and the activity of the established Harvard Clubs in all parts of the country. The Secretaries of College Classes, the Alumni Associations of the Professional Schools, and all Harvard Clubs are requested to contribute to the work of preparing the new address-list, which will include a geographical classification of the names and addresses, so that it will be easy to find the Harvard men in any town, city, or state. The Alumni Association has taken control of the Harvard Bulletin, which will be its official organ; and the permanent maintenance of the General Secretary's office, and of all its work, will depend on the profits accruing from the publication of the Bulletin. The Boston office is intended as headquarters for Harvard men in Boston, whether residents or visitors. The Secretary is at the service of the Alumni, and he will be dependent for the success of his work upon their coöperation.

It is obvious that the different parts of Mr. Wells's work may be made to help each other. Thus, the Appointments Office should be greatly helped by the new resources of the General Secretary of the Alumni Association; for the Appointments Office not only secures suitable positions for undergraduates and past members of the University who are seeking employment, but also responds to calls made upon it to supply the best available Harvard candidates for vacant positions. The service is not limited in its application to the students of any one department of the University, or to any one class of occupations. With the steady help of the Alumni, and of all departments of the University, the work of the Appointments Office might be greatly extended. In time the office will supply the best demonstration of the value of a college education towards the winning of a livelihood. It will prove that the educated young man of fair capacity, from the moment he begins to earn his livelihood, gets on faster than the uneducated young man, and goes farther. It is also a fact,

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though the Appointments Office cannot prove it, that the educated young man gets more enjoyment and durable satisfaction out of life than the uneducated, provided only that he keep his health.

The report of the Secretary for Appointments (p. 343) will be interesting to the Governing Boards of the University and to all its alumni and friends; for it indicates very plainly the increasing influence of the University, first, on the profession of teaching, and secondly, on the conduct of large businesses and of the great industries. It also shows what a large proportion of the total number of students in the University are dependent either in whole or in part on opportunities to earn their living while they are pursuing their studies. For such persons the Appointments Office found no fewer than 1452 jobs during the year 1906–07. Of the temporary jobs procured in great variety, it will be noticed that fewer than one-third have anything to do with teaching, or literary or scientific work. The great majority of the employments are engaged in merely for the sake of the wages, or pay. It is a good sign that students can make themselves useful in such a variety of ways, while they are giving a large portion of their time, either by day or by night, to study. The number of permanent positions filled is also large, and the sum of the annual salaries received by the 599 persons placed was more than $450,000. Tutoring appears to be the most profitable occupation which a young graduate can take up immediately on graduating. The service of secondary schools yields for recent graduates the next best immediate return; while business, and the service of universities, colleges, and technical schools are about equally advantageous for the young newcomer.

The services of the Appointments Office are rendered gratuitously, no charge being made either to the employer or the employed. A branch office was opened last spring at 50 State Street, Boston, in the offices of the Alumni Association, where the Secretary will be in close communication with Harvard Clubs, and the Officers of the Classes, and with Alumni, who, as administrators, educational or other, officers of corporations, or members of partnerships, need the services of educated young men.

Some new forms of scholarships were created during the year under review, — forms which may have an interest for persons

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who are contemplating the creation of scholarships in any endowed institution of the higher education. Thus, four scholarships, two with an income of $200 each and two with an income of $150 each, bearing the name of Edwin Erwin Coolidge of Natick, Massachusetts, a member of the Class of 1901, were established to be administered as *loans*, the loans to become due five years after the cessation of the incumbents' connection with Harvard University as students. In the assignment of these scholarships, preference is to be given, first, to the descendants of John Coolidge who settled in Watertown, Massachusetts, about 1630, and secondly, to residents of Natick. Subject to these preferences in the assignment, these scholarships are intended to confer an academic distinction like that attaching to other scholarships; but it is the desire of the founders that "in estimating the worth of a candidate for one of these scholarships, weight shall be given not only to his mental and moral qualities, but also to his bodily health and vigor, especially as shown by proficiency in outdoor sports."

An anonymous giver established a fund of $5000 in memory of Jonathan Fay, who was born at Westborough in 1754, entered Harvard College in 1774, accompanied the College to Concord when the American troops occupied the College buildings in Cambridge during the siege of Boston, there met Lucy Prescott — born in 1757 — and married her in 1776, while he was still a student, and in memory also of their son, Samuel Phillips Prescott Fay, who was born in 1778, the year in which his father graduated from Harvard College. Jonathan Fay settled in Concord and became a lawyer and a representative in the General Court. The son settled in Cambridge as a lawyer, was Overseer of Harvard College from 1824 to 1852, and Judge of Probate for the County, and lived long in the house, still called the Fay House, making part of Radcliffe College on the corner of Garden and Mason Streets. The Fund now established by an anonymous donor recalls the memory of these honored members of the legal profession, long since dead. The income of the Fund is to be applied first,

"... to the expense of preparing and issuing a diploma in such form as you [The President and Fellows of Harvard College] may determine, provided that it shall appear therein that it is issued for high scholarship,

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and in memory of Jonathan and Samuel Phillips Prescott Fay. This diploma is to be given to the member of each graduating class of the Law School who, in the judgment of the Faculty of that School, has, during his three years' course, shown the greatest ability. The balance of the income in each year is to be paid at the close of the school-year to such student in the Law School as the Faculty of that School consider most worthy of assistance, provided he has finished at least one full year's course, and they are satisfied of his intention to complete the three-year course; but this provision shall not prevent this payment being made to a third-year student if deemed worthy as aforesaid. . . . To be eligible to receive a diploma or payment, both father and mother of the student must have been born citizens of the United States of America. If at any time women are admitted as regular students in the Law School, they are to have the same rights as men hereunder."

In the will of John Bartlett, of Cambridge, the author of "Familiar Quotations" and of the great Shakespere Concordance, the following section occurred,

"On my dear wife's decease, it is my will that the sum of ten thousand ($10,000) dollars shall be paid in her name to the Corporation of Harvard University to endow a Willard Scholarship in memory of Samuel Willard, Vice-President of said University, her ancestor, and of Joseph Willard, President, her grandfather, and of all his descendants, graduates of Harvard";

whereupon the Corporation

"Voted to establish the Willard Scholarship in the Graduate School of Arts and Sciences with a stipend of $450 upon the foundation bequeathed by John Bartlett, Esq., late of Cambridge, deceased, the scholarship to be assigned each year to a person who has attained an established position as a teacher in a college or secondary school, or as a superintendent of schools, and intends to return to educational service after his residence in the University — preference to be given to teachers of literature and to graduates of Harvard College."

Samuel Willard was Vice-President from 1700 to 1707, and Joseph Willard was President from 1781 to 1804. Samuel Willard graduated in the Class of 1659, and died 200 years ago. Joseph Willard was a member of the Class of 1765, and died more than a hundred years ago. This Samuel Willard was the first of six Samuel Willards to graduate at Harvard College, and this Joseph was the first of six Joseph Willards to graduate at Harvard College. The act of John Bartlett revives the memory of these two faithful servants of Harvard College, and will trans-

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mit their names to many generations through the beneficiaries of the Willard Scholarship he has founded.

By the will of Miss Priscilla Clark Hodges the President and Fellows received $4000 to establish a scholarship to bear her name, without any designation of the department in which the scholarship should be used, or of the subject to the promotion of which it should be devoted. The Corporation assigned it to the Graduate School of Applied Science.

By vote of the Corporation passed May 13, 1907, the President and Fellows established in Harvard College six scholarships of $150 each, from the income of the Daniel A. Buckley Fund. The real estate in which this Fund was invested, situated in Cambridgeport, needed when it came into possession of the Corporation considerable expenditure for repairs and improvements. These changes having been made, and the buildings being occupied by responsible tenants, the Corporation decided to give effect to the late Daniel A. Buckley's benevolent intentions towards needy students who enter Harvard College from public or non-sectarian schools in Cambridge. It was the intention and desire of the testator "to promote as much as I can education within the limits of said city of Cambridge, and for this purpose to furnish as far as possible from my said estate . . . without regard to sex, race, creed, or color, further education in Harvard University to such graduates of the schools before named, who may earnestly desire such education, and whose circumstances and condition in life would otherwise prevent them from acquiring." It will be observed that these scholarships are for the benefit exclusively of graduates from Cambridge schools.

It is well that scholarships continue to be endowed in the University, for they make it possible for many deserving young men to come to Harvard University who, without such aid, might fail to obtain a thorough education, or find themselves obliged to go to other universities where no tuition-fee is charged. Inasmuch as most of the scholarships have a stipend higher than the tuition-fee, a balance remains applicable to the incumbent's personal expenses; so that he is better off than he would be at a free-tuition institution. Since all scholarship-holders at Harvard pay tuition-fees, the greater part of the income of scholarship funds supports instruction.

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The endowed institutions of the higher education must look forward to formidable competition with a large number of strong State universities in which tuition is free. They may find encouragement in the fact that the endowment of a scholarship has proved to be an attractive form of educational endowment. It does not require a large sum of money, $6000 being an adequate fund for a single scholarship, and it does offer to the giver the pleasing prospect that his gift will continue through centuries to contribute to the prolonged and thorough education of deserving young men who, without his aid, could hardly have attained that high privilege.

In the figures of the following table, the holders of honorary scholarships, that is, of scholarships without stipend, are included:

| | Scholarships of the First Group. | Scholarships of the Second Group. |
|---|---|---|
| From Public Schools . . . . . | 40 | 89 |
| " Endowed " . . . . . | 5 | 44 |
| " Private " . . . . . | 3 | 18 |
| Total . . . . . | 48 | 151 |

In the first group there were seven John Harvard (honorary) Scholarships out of the total number 48; in the second group there were 81 Harvard College (honorary) Scholarships out of the total number 151.

The honorary scholarship holders are one-seventh of the first group, but more than half of the second; so that it is by no means true that the high scholars in Harvard College are all poor men. It is true, however, that the public schools deliver to Harvard College a large majority of the men who, during their college life, attain high standing as scholars. Out of 199 scholarship holders for the year 1906–07, 129 were prepared in the public schools. In all probability the boys who come from the public schools have a more vivid sense than the others that they must acquire in college the capacity to earn a good living in some intellectual calling.

The list of those candidates for the degree of Bachelor of Arts or of Bachelor of Science who were entitled to Commencement Parts, under either the old rules or the new rules, or under both, illustrates the same fact with regard to boys coming from the three classes of schools above mentioned. From the public

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schools came 75 of these good scholars; from the endowed schools, 25; and from the private schools, 12; or, in other words, the public schools supplied twice as many recipients of this distinction as the endowed and private schools put together.

The work done by the Committee on Admission during the past two years showed its good results in the Admission examinations of 1907. The Committee dealt in 1906–07 with 1070 applications for admission, rejected 165, held over until September the cases of 159 applicants of whom 51 appeared in June but not in September, and admitted 854 persons to Harvard College, including 180 admitted as Special Students. The Committee also dealt with 928 applications for preliminary examinations. The total number of applicants for both final and preliminary examinations was larger than in the previous year; but the chief gain was from Massachusetts. The South Atlantic and South Central divisions of the country showed slight losses. All other divisions showed gains. The College and the Scientific School (now united in a single undergraduate department) have always drawn their students from a number of schools large in proportion to the number admitted each year. Thus in 1906, 220 schools supplied the final candidates for admission; in 1907, 223 schools. Among these schools, however, only 112 were represented in the final examinations of both 1906 and 1907. The schools from which the College and the Scientific School receive students every year number fewer than 40. Before 1906, the year in which young men were first admitted to Harvard College as candidates for the degree of S.B., the percentage of candidates from high schools had been diminishing; but both last year and this year the percentage of candidates from public schools has risen, until last summer it reached 43.3 per cent. This is the highest percentage from public schools for many years. Undoubtedly the percentage of candidates from public schools would be still further raised, if all the subjects which candidates for the degree of S.B. may present for admission to Harvard College were also recognized as admission subjects for the degree of A.B. It is a curious fact that botany, zoölogy, civil government, economics, and freehand drawing, all of which are recognized in College as suitable subjects to count for the degree of A.B.,

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are recognized as suitable subjects of study at school only for candidates for the degree of S.B. This discrimination is not against the subjects as culture subjects, but against the secondary schools as places to teach those subjects except to boys whose education is to cease at eighteen, or whose education is to be continued in scientific schools. Inasmuch as the elements of these subjects are obviously suitable for boys of from fourteen to eighteen years of age — if not younger — this unnecessary breach between the public schools of the country and Harvard College is much to be regretted.

Under the wise guidance of the Committee on Admission the number of final candidates who made use of the examinations of the College Entrance Examination Board trebled between 1906 and 1907, and the number of preliminary candidates doubled. Moreover, by means of these Board examinations the College was brought into connection with 21 schools new to our list, 19 of which are outside of New England.

The report of the Committee on Admission (p. 352) calls attention to the fact that nearly 26 per cent., namely, 203 persons, of the 798 candidates for admission at the final examinations took more than the required number of examinations. These candidates presenting extra subjects represented 79 schools, which were divided as follows: public schools, 40; private schools, 23; endowed schools, 16. The examination records of these young men were generally good. These facts do not bear out the contention of some schoolmasters that colleges in general require more work for admission than can be done well at school. Harvard College requires for admission more than any other college in the country, and yet a quarter part of all the candidates for admission by examination present extra work, and give evidence that they have done their work well. The difficulties of which some schools complain are not caused by the amount of work asked for by the colleges, but by lack of proper adjustment between the college tests and the school programmes, and by the distractions of contemporary school life, the reduced number of school hours per week, and the exaggerated sports and vacations.

There is some difference of opinion between the Committee on Admission and the Dean of Harvard College concerning the new

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rule which the Faculty adopted May 7, 1907, on recommendation of the Committee, as follows: "That hereafter no extra admission subject be counted as a course or half-course towards a degree unless offered in advance as the equivalent of college work, and unless the examination book has been read with that end in view, and marked not lower than C." The Committee contends that by using the admission examinations for extra subjects studied at school, the candidate for admission can advance himself towards his degree with lower grades than would be allowed to count if he studied the same subjects in Harvard College, and they would therefore insist on the attainment of a higher standard at the examination on extra subjects that are to be counted towards a degree. The Dean of Harvard College, on the other hand, sees in this new regulation (p. 105) a discouragement of attempting extra work at schools, and an attack upon the three-year degree. Since the number of men who take the degree of A.B. or S.B. in three years, or three and a half years, is steadily increasing, the Dean fears that the new regulation will compel more of this large class to elect five and a half or six courses in a year. Anticipating subjects in college by means of good school work reduces the number of persons who, while in college, feel compelled to take more than five courses in a year. Inasmuch as the new rule was to be applied first to the class which enters college in 1908, no actual experience of the working of the rule has yet been obtained.

The number of candidates who present the new advanced subjects in the June examinations continues to be small — for example, two presented counterpoint, five physics, and seven astronomy, against 440 that offered advanced French and 426 that offered advanced Latin.

The Committee on Admission states strongly the objections to the ancient practice of admitting young men to college on condition that they make up certain subjects in which they appear to be deficient. Such young men must either continue, by the side of their college work, the school subjects in which they have failed, and pass the admission examinations in those subjects at some later opportunity or they must take a college course in the subjects in which they have failed at the admission examinations. Both of these methods injure college work; the first by

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compelling the student to take time from his college work in order to make up unsuccessful school work; the other by compelling the college to maintain elementary courses not far removed from the school courses in the same subjects.

The Committee on Admission is much impressed with the local character of the Harvard admission requirements by examination. It conceives that the rapid growth of the country and the rise of many other colleges necessitate corresponding changes in the Harvard regulations concerning admission, if close connection is to be maintained between the College and the public schools. Once the College could prescribe the programmes of neighboring high schools; but now the programmes of secondary schools, whether near-by or distant, are rightly settled by the needs of the communities in which the schools are situated. The existing scheme of admission requirements assumes that the College is closely related to the schools from which it derives its students, and is proposing to continue for almost all its students instruction in the subjects treated in those schools. This close relationship no longer exists; and a large proportion of the students admitted to Harvard College to-day enter immediately upon the study of subjects new to them. Harvard College needs a scheme of admission requirements so broad and flexible that it will serve as a means of selecting for the College capable boys from all parts of the country. This scheme must recognize a great variety of school programmes, and must not attempt to compel the use of any particular method of teaching any subject in secondary schools. The present rules permit a division of subjects and of examinations between two years or more, and this permitted division is the way of escape from the considerable difficulty of passing simultaneously ten examinations in eight subjects. This way of escape, however, assumes that a student decides to come to Harvard College two, or even three, years in advance. This assumption is not a safe one. Families at a distance, or even near at hand, are often unable to make this decision so far in advance; and there are many young men who come near to the end of their school course before they feel a strong desire to continue their studies. For distant families and pupils the present scheme of admission to Harvard College is not favorable. The examination for admission to Harvard College, whether as a

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candidate for the A.B. or for the S.B., should, therefore, be made a convenient one for boys who take the complete examination n one year. The difficulty could be diminished by setting for candidates who attempt to pass the whole admission examination in one year, a single examination in those subjects in which there are now two. The English Department has already tried this method and found it to work well. Any candidate for admission may take the examination in English *A* (the higher of two examinations), and thereby satisfy the requirement for admission, and also anticipate English *A* of the Freshman year. This arrangement has the advantage of permitting pupils and teachers in the secondary schools to work with greater freedom within a larger requirement than that of Elementary English. It is not impossible to make a similar arrangement with respect to the other languages and to history and algebra.

Another difficulty with regard to Harvard admission examinations is that the question-papers are prepared each by some special Department interested in the teaching of one subject, and every Department has a theory as to what school preparation in its own subject should be. The men within the Department to whom is assigned the duty of preparing question-papers and reading examination books are seldom in position to know much about secondary schools, except those in the immediate vicinity of the College. It happens, therefore, that when a young man applies for admission from a school which has had no connection with Harvard, he is subjected to tests based upon school courses different from those he has followed; and he may fail for that reason, although he has done good work at school, and is fully capable of pursuing the College work. In short, the scheme of admission requirements for Harvard College ought to be based upon generally accepted school courses, and not upon the programmes of a few neighboring schools; otherwise the College will be cut off from a large body of students who have done good work at school, and are perfectly capable of doing good college work. A recent inquiry into the working of the requirement in Elementary Latin well illustrates these principles. The Harvard requirement called for some knowledge of Latin Poetry at the end of the third year of a school course. Two investigations on this subject were lately made, one by the Committee on Admission, and the other

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by an Overseers' Committee, and the results of both investigations were the same. They both showed that in the majority of schools, it was impossible for a boy to get instruction within the regular programme which enabled him to take the Harvard examination in Elementary Latin if he divided the admission examination. Out of 86 schools which had within the last ten years sent boys to Harvard, only 22 found no difficulty with the present requirement in Elementary Latin, and of these 22 schools, 19 were in Massachusetts, and only one was outside of New England. Sixty-four schools replied that they were unable to adjust their programmes to the Harvard requirement. Among the schools in the North Central Association of Colleges and Secondary Schools, 57 replied that they gave instruction in Latin Poetry before the last school year, and 147 replied that they did not give instruction in Latin Poetry until the last year. As a result of these inquiries, the Faculty, on recommendation of the Department of the Classics, has during the current year changed the definition of Elementary Latin. For four years this single Department of the Classics has seriously checked resort to the University by setting examinations at variance with the programmes of most American secondary schools. The lesson to be derived from this experience is that all the definitions of admission requirements should be carefully compared with school programmes and with the definitions of examination subjects at other colleges, and that all non-essential diversities, whose only effect is to obstruct access to Harvard College, or interfere with the liberty of schools in preparing boys for college work, should be done away with.

The Committee on Admission has excellent opportunities for studying the uncertainties of admission examinations. Thus, for example, they can compare the records at the Harvard and the Board examinations of some boys who take both. Some boys fail in the Harvard examinations, but are passed by both Harvard and Board examiners in the Board examinations; others fail in the Board examinations, but pass the Harvard examinations; others pass both sets of examinations with striking differences in grades. These examinations are taken in successive weeks. The provisions made for the admission of Special Students afford

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some means of alleviating the consequences of unsatisfactory examinations. During the years 1902, 1903, and 1904, the Committee on Special Students admitted as Special Students 67 men who had been rejected by the then existing Committee on Admission Examinations. Of these 67, only 19 failed to justify the action of the Committee. In 1906, the new Committee on Admission admitted 66 men as Special Students who had failed to obtain examination records which would admit them to the Freshman Class. The considerations which induced the Committee to admit these men were their ages, their school records, the recommendations of their teachers, and their characters and purposes as described by their teachers and manifested in personal interviews with members of the Committee. Of these 66, only 7 failed in what was really their Freshman year. More than half of them, having made up their admission deficiencies, returned this year as Sophomores.

The Harvard admission requirements assign to Greek a larger value than is assigned to other subjects which ordinarily occupy the same time in school programmes. One effect of this policy is to admit to College boys who present Greek, with one subject fewer than they would have to offer without Greek. This artificial stimulation of the study of Greek does not appear to be successful, unless perhaps in retarding the decline of the study. The selection of Greek in the June examinations for the last five years has been as follows: —

| | 1903. | 1904. | 1905. | 1906. | 1907. |
|---|---|---|---|---|---|
| Elementary Greek . . . | 141 | 121 | 105 | 95 | 82 |
| Advanced Greek . . . . | 276 | 264 | 249 | 226 | 196 |

Other subjects are assigned disproportionately low values, and in consequence are not well provided for in the schools, or are studied there with less vigor than is desirable. Thus, botany, zoölogy, civil government, economics, and freehand drawing can each be counted for only one point, and can be offered only by candidates for the S.B.

School work and college work overlap each other to an undesirable extent, partly in consequence of the College policy of admitting applicants on condition that they make up certain defects in their preparation. The new Committee on Admission has increased sensibly the percentage of Freshmen admitted

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"clear" (without conditions); but still about 55 per cent. of those admitted to the Freshman Class in 1907 were admitted with "conditions." In other words, more than half the Freshman Class still have some school work to do while they carry on their College work, or must take in College courses which are in large part repetitions of instruction provided in their schools.

There is no subject more worthy of the immediate attention of the Faculty and of the Governing Boards than the requirements for admission to Harvard College, which has become the only undergraduate department of the University; for on those requirements depend the future relations of Harvard University to the secondary schools of the country — public, private, and endowed. The new Committee on Admission has acquired much information on the subject, has already introduced important improvements, and is entitled to have its future recommendations treated with great respect. The usefulness of three measures seems to have been already demonstrated: — (1) Establishing a practical identity of the Harvard requirements with those of the Board of College Entrance Examinations, with the view of gradually withdrawing the Harvard June examinations; (2) re-adjusting the ratings of the languages at the admission examinations; (3) recognizing as admission subjects for candidates for the A.B. all subjects taught in both school and college that may be counted in College towards the A.B. The object should be to enable capable boys to enter Harvard College with credit from any one of the hundreds of good secondary schools which towns and cities or private resources have built up in the United States and Canada.

During the year 1906–07 the votes of the Corporation establishing a $5 fee for the final admission examination to Harvard College and the Lawrence Scientific School, in addition to the $5 fee for a preliminary examination, took full effect. The fee of $3 charged for an examination to make up a condition at entrance, for an examination to make up an omitted examination in College, and for an examination in anticipation of a subject of College instruction, yielded more than in the preceding year. The result was that the receipts defrayed all the expenses of the admission examinations, of the examinations to make up omitted College examinations and conditions received at the admission examina-

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tions, and of anticipatory examinations. These various examinations were formerly a considerable charge upon the College; but their cost to the College is now a little more than covered by the fees collected.

At the instance of the Board of Overseers, the Faculty of Arts and Sciences made through its Committee on Instruction a re-examination of the entire list of courses of instruction offered by the Faculty, and considered the list of courses offered by each Department with the intent to increase its educational efficiency, and if practicable to diminish its cost. The Committee inevitably reported to the Faculty that there is only one way to reduce the number of courses offered, and thereby save annual expenditure, namely, to reduce the number of teachers, — either the permanent teachers, or the annually appointed, or both. With reductions of the teaching force the Faculty of Arts and Sciences has, heretofore, had nothing to do. There have been no additions to the teaching staff of late years, except a small number of appointments for which all the annual charges were provided by gifts or bequests. Assuming that the teaching force is to remain what it is, the Committee examined every elective course about the value of which there was any doubt. They detected "few courses, if any, which the Departments offering them cannot ably defend." They expressed the opinion that "from a catholic point of view what we need is not fewer teachers, but more, — teachers to fill gaps which a study of the elective pamphlet reveals; . . . so difficult is it for a university to meet the complicated demands of modern intellectual life." The remarks of the Dean of the Faculty on this subject (p. 99) will be found interesting. Unfortunately, the financial condition of this department of the University during the past few years has obliged the Corporation to reduce the number of professors in the Faculty of Arts and Sciences, as opportunity has offered.

The Faculty entered on a new undertaking in the year 1906–07, an undertaking capable of a large development. They offered nineteen courses for teachers, to be given in the afternoons and on Saturdays, the subjects of which included education, fine arts, German, American history, Latin, mathematics, music, ethics, physical education, physics, architecture, French, pub-

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lic Speaking, and Russian Literature. These courses were open to women as well as men, and the fee for each course was $15. This is another effort on the part of the University to be serviceable to teachers in schools situated within easy reach of Cambridge. Of the courses offered, eleven were given, which were attended by 60 men and 96 women. Similar courses are being given during the current academic year. The Faculty authorized the granting of certificates, on the recommendation of the instructors, to those students in these courses who did the required work, and passed satisfactorily a final examination. Like the summer courses, they suggest strongly that the University ought to encourage young teachers already in service to pursue their studies in a systematic way during several years, and to this end allow them to look forward to the attainment of a degree.

The Boston School Committee has encouraged teachers in the Boston schools to do work of this sort, especially by offering them a "sabbatical" year under favorable conditions. The increasing use of the summer vacation for purposes of study, both by teachers and by university students, points in the same direction; and the example of the University of Chicago, whose best quarter is the summer quarter, invites imitation.

The Visiting Professor from Germany, in the year under review, was Eugen Kühnemann, of the University of Breslau. He gave two half-courses conducted in German, the first on "German Literature in the 18th Century," and the second on the "German Drama of To-day." He also offered a seminary course during the first half-year on Schiller's Wallenstein, and gave public lectures on the "Young Goethe," and "Goethe's Faust." He took part also in appropriate conferences and meetings of students' societies, entering heartily into the literary and scholarly interests of the College. His four months' visit to Cambridge was of great advantage to the German Department; and for all Departments he set a high standard of performance to lecturers on literature.

The exchange of professors with Germany has thus far been highly satisfactory to Harvard University. The third exchange is now in progress, and is clearly giving great satisfaction. It is a unique experiment, all other Harvard exchanges with foreign universities being conducted on quite other plans.

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In the spring of 1907, two eminent Englishmen and a distinguished Russian scholar resident in England were lecturing simultaneously at Harvard University. Mr. Gilbert Murray, formerly Professor of Greek at Glasgow, gave a course of six lectures on Greek Traditional Poetry; Major Leonard Darwin, of London, gave four lectures on Municipal Ownership; and Dr. Paul Vinogradoff, Professor of Law at the University of Oxford, delivered at the Law School a course of six lectures on the Elements of Ancient Law. Occasional courses of lectures from such scholars and experts as these contribute very much to the interest of academic life in Cambridge.

Two comparatively young Professors were appointed Deans of Departments during the year — Professor Wallace Clement Sabine, to be Dean of the Lawrence Scientific School, succeeding the late Professor Nathaniel Southgate Shaler, and Professor William Wallace Fenn, to be Dean of the Divinity School, succeeding Professor Francis G. Peabody, who resigned the Deanship after two years of service as acting Dean during the term of Professor Charles Carroll Everett, and five years of service as Dean.

The Dean of Harvard College reports (p. 101) the first effect on registration in Harvard College of the transfer to Harvard College of a large part of the candidates for the degree of Bachelor of Science, formerly registered in the Lawrence Scientific School, and also the first giving of the newly established degree of Bachelor of Science in Harvard College. He also points out that the Senior Class increased in the year 1906–07, returning to about the number of the year 1903–04; but that it has again dropped during the current year to a number decidedly below that of 1903–04. He attributes the fluctuations in part to the absorption by the College of the undergraduate portion of the Lawrence Scientific School. It is the opinion of the Dean that the three-year degree is "gradually but steadily becoming the normal type."

The Dean points out that the decrease in the number of the Senior Class, which has been decided in most years since 1900–01 and yet not steady, appears again in 1907–08, in which year the Senior Class numbers 292. Of this number, 17 had completed

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the requirements for their degrees in June, 1907, and 131 others could have so arranged their work as to complete the requirements in the middle of the present year. In other words, more than half the present Senior Class are staying in Harvard College longer than they need to in order to get their degrees. There can be no doubt whatever that any student of fair ability, who will work during at least half of two summer vacations, can get the degree of A.B. or S.B. in three years, or three and a half years, and do his work thoroughly well. The average student, as well as the good student, should therefore invariably aim to take his first degree in less than four years, and should then hasten into his professional school, or into direct work towards a livelihood and a useful and interesting career. This is clearly the way to get the most vigorous training, and also to advance most rapidly towards professional success and family life.

The Dean's report dwells on a long-standing evil which impairs the discipline of Harvard College, namely, the tardiness of many teachers in returning grades at the times appointed by the Faculty, not only the grades obtained at the hourly examinations and the mid-year examinations, but even those obtained at the final examinations in June. These delays, for which students as well as teachers are responsible, prevent the Dean's office from making prompt report concerning students' failures to parents and guardians, and to the Faculty and the Administrative Boards which often need to deal in some corrective way with the students who have failed in their examinations. This difficulty has increased in recent years with the increased number of teachers, and the increasing proportion of teachers who are not members of the Faculty. Both the Faculty and the Corporation have considered this subject during the current year with the intent to discover and apply a remedy.

The report of the Dean of the Scientific School describes in full the manner in which the plan for reorganizing the University's work for Applied Science, adopted in March, 1906, was carried out during the year 1906–07. This plan proposed the establishment of a graduate school of applied science, the transfer to Harvard College of the preparation of candidates for the degree of Bachelor of Science, and the maintenance of the former four-

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year programmes of study in the Lawrence Scientific School, so long as there should be students who wished to follow these programmes. It was part of the plan that the Graduate School of Applied Science should be open to graduates of all good colleges and scientific schools, just as the Graduate School of Arts and Sciences is, and accordingly the numerous courses of study in the Graduate School of Applied Science were not to be based exclusively on the Harvard qualifications for the degree of A.B. or S.B. At the time of the adoption of this plan, no one felt able to predict how the 504 students then in the Lawrence Scientific School would distribute themselves under the new scheme, or what effect would be produced on the total number of undergraduates in Harvard College and the Scientific School taken together. The report of the Dean, page 111, sets forth what actually happened in the first year of the operation of the new plan.

It appears, in the first place, that 204 students continued to follow the old four-year programmes; but that the programme called General Science almost disappeared, 13 graduating, 23 being transferred to the College, and 21 leaving the University. Only 6 remained in the General Science programme. Since only 9 students remained in the programme called Anatomy and Physiology, a programme introductory to medical study, the Corporation early in the year, on recommendation of the Faculty, voted to withdraw the programmes in General Science and in Anatomy and Physiology, except for students already registered in them. All Special Students in the Scientific School were transferred to the College. Seventy-two students transferred themselves from the Scientific School to the College as candidates for the degree of S.B.; 32 students, who were in the Scientific School during 1905–06, were transferred to Harvard College as candidates for the degree of A.B., having passed the examination in Elementary Latin at the time of their admission to the Lawrence Scientific School. The Dean prints an interesting table, page 112, which accounts for all the 504 students who were members of the Lawrence Scientific School in the year 1905–06. At the opening of the year 1906–07 there were in Harvard College 47 new candidates for the S.B. degree. Finally, for the first time in four years, the combined undergraduate departments (College

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and Scientific School) showed a gain in the number of students. It appears, therefore, that there was no net loss of students in the University in consequence of the reorganization of the instruction in applied science, but, on the contrary, some immediate gain. For the future, the chances are all in favor of improvement in the quality of students of applied science, and of increase in their number. The terms of admission to Harvard College are sure to be widened and improved by the advent of hundreds of students who are seeking the degree of Bachelor of Science. The College will be brought into useful connection with a large number of secondary schools which can prepare boys well for the courses which lead to the degree of S.B. in Harvard College. The Graduate School of Applied Science will be resorted to by graduates of other colleges and scientific schools, for the reason that Harvard University is already admirably equipped for giving advanced instruction in mining and metallurgy, architecture, landscape architecture, forestry, chemistry, geology, and biology, and is sure to be completely equipped within two or three years for teaching all branches of engineering. Already, in all these branches of applied science, graduation at Harvard University secures to competent and faithful young men prompt access to good professional employment. It is believed that the degree of Master offered by the Graduate School of Applied Science, as, for instance, Master in Electrical Engineering, or Master in Architecture, or Master in Forestry, will prove to be acceptable and significant.

On the 11th of March, 1907, the Special Joint Committee of the two Governing Boards on the Regulation of Athletic Sports, which had been in existence for some months, presented to the President and Fellows a report containing in substance the following recommendations : —

(*a*) That hereafter the Dean of the Faculty of Arts and Sciences, the Dean of Harvard College, and the Dean of the Lawrence Scientific School be the Faculty members of the Committee on the Regulation of Athletic Sports.

(*b*) That certain changes be made in the mode of electing the three undergraduate members of the Committee.

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(*c*) That the Committee be recommended to secure the services of some man, who can give his entire time to the work, to act as graduate manager and the administrative officer of the Committee.

(*d*) That the expenses connected with athletic contests be reduced by diminishing the cost of training tables, and reducing the number, distance, and duration of trips of athletic teams away from Cambridge.

(*e*) That the number of intercollegiate contests be reduced.

(*f*) That the Athletic Committee use every effort to get concerted action with other colleges to abolish professional coaches.

(*g*) "That the Athletic Committee be instructed to apply the entire surplus of athletic receipts over the sums needed for current athletic expenses to the extinguishment of the debt on the Stadium until that debt is paid, and then to reduce gate receipts in such manner as it shall decide, so that there shall only be sufficient surplus each year for the gradual development of the athletic buildings and grounds of the University."

Whereupon, the President and Fellows voted that the report of the Special Joint Committee be accepted as a whole, and that the Committee be discharged. They also rescinded the vote of October 15, 1888, constituting a Committee for the Regulation of Athletic Sports, and instead thereof passed another vote constituting the Committee in accordance with the recommendations of the Special Joint Committee.

The exaggeration of athletic sports in schools and colleges remains a crying evil, and there are no clear signs that any effectual remedy is taking effect. The strong tendency of the highly competitive, violent games is to reduce the proportion of boys and young men who play them, and to impede the universal development of wholesome sports accessible to all. To be sure, playing on teams is now confined to school years and three years in college, and is not allowed to students in professional schools; but these limitations have no tendency to make the playing of foot-ball, base-ball, hockey, and basket-ball more general among school boys and students, for the fierce competition makes these games so intense that they are unsuitable for any but a small proportion of the school boys and the students.

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The college sport most popular with spectators and newspapers, namely foot-ball, is the least useful of all the games; because a smaller proportional number of students are fit for that sport than for any other. Another objection to all the violent sports is that they cannot be played after the college period. A sport which will be useful to any healthy man until he is sixty is a much more valuable college sport than one that he cannot play after he is twenty-three. Every intelligent youth ought to cultivate sports that he knows will serve him until he is old, rather than those he cannot keep up after he leaves college. The moderate, generally available, and long available sports are also much more wholesome than the violent sports which only a few can endure, and these few only while they are young.

The means of repressing the prevailing exaggeration of athletic sports are obvious, as was stated in the last Report. The number of intercollegiate contests should be reduced to two in each sport during any one season, the rest of the competition in each sport being exclusively home competition. The most successful sport at Harvard, as regards bringing out many competitors for honors in the sport, is rowing; and it has been abundantly proved that the interest in rowing can be fully maintained on two intercollegiate competitions in the year. In order to give this policy a chance to succeed, it would be necessary for two or more colleges to agree that they would permit only two intercollegiate contests in a season in each sport; for it would, of course, be useless for a college team that was permitted only two intercollegiate contests in a season to compete with a college team that was permitted ten or twenty. To turn out on the right day the most perfect team possible in any one of the intense sports, is a piece of administrative business to which much money, the best expert advice, the skill of professional teachers, and the whole life of the players for months must be devoted. One feature of this business is watching the performances of school teams all over the country, and securing the best boy players by offering them favorable opportunities, pecuniary or other. Colleges which go heartily into this business will almost certainly succeed in athletic contests more frequently than colleges which do not. Whether they will so promote the real objects for which colleges exist,

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is a different matter. Many commercial interests strongly promote the exaggeration of athletic sports in schools and colleges, — as, for example, the hired managers and trainers, the dealers in supplies, the hotels, transportation companies, and newspapers.

The receipts from all the sports at Harvard have been as follows for four years past:—

| 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|
| $110,845.13 | $108,071.62 | $125,233.71 | $106,125.10 |

The expenses for the same years have been:—

| | | | |
|---|---|---|---|
| $61,338.55 | $63,487.12 | $76,690.89 | $71,714.14 |

Freshman foot-ball and Freshman base-ball nearly pay for themselves. Track athletics, foot-ball, base-ball, hockey, and tennis pay for themselves. The principal money-maker among the sports is foot-ball, on account of the enormous crowds that assemble to witness the principal games.

The Committee on the Regulation of Athletic Sports endeavored in 1906–07 to reduce the cost of training tables, and succeeded in some measure with every organization except the boat club and the hockey club. The total expenditures on training tables for four years past have been :—

| 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|
| $7,750.58 | $7,101.91 | $8,040.06 | $6,285.42 |

When the report of the Joint Committee of the Corporation and Board of Overseers appeared, it was too late to reduce the number of intercollegiate games for the spring of 1907. The new Committee organized in June, 1907, in accordance with the action taken by the Corporation and Overseers, found the schedule of foot-ball games for the fall of 1907 practically settled. They have since confined themselves to preventing any increase in the number of intercollegiate contests; so that no diminution in the number of those contests is to be looked for during the current academic year.

The Committee has not yet succeeded in obtaining any general manager of the sort intended by the Joint Committee of the Corporation and Overseers; so that a great deal of labor still falls on the Faculty members of the Committee, contrary to the

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intention of the Joint Committee. It was the purpose of that Committee to prevent the devotion of any large portion of the time of professors to the management of athletic sports, the experience of Professors Hollis and Horatio S. White, as Chairmen of the Committee on the Regulation of Athletic Sports, having satisfied those gentlemen and all the members of the Joint Committee that the functions of the Chairman of the Athletic Committee could not be efficiently discharged by any professor without sacrificing both his interests and the superior interest of the University in his function as teacher.

The American modifications of Rugby foot-ball have now been played long enough to make possible a judgment as to the success of eminent foot-ball players in after-life; and the verdict is what might have been expected. It clearly appears that neither the bodily nor the mental qualities which characterize foot-ball players are particularly serviceable to young men who have their way to make in the intellectual callings. Foot-ball toughness is not the kind of toughness which is most profitable in after-life. The weight and insensitiveness needed in the foot-ball line are not the bodily qualities which best serve the man who must make his living by quick, accurate, and inventive thinking. To get accustomed to make one's greatest exertions in the presence of shouting thousands and of the newspaper extra is bad preparation for the struggles of professional men, who must generally do their best work quite alone, or in the presence of a few critical observers. Even for modern warfare the violent, competitive sports afford no appropriate preparation, inasmuch as in real warfare the combatants seldom see each other.

The Acting Dean of the Graduate School of Arts and Sciences calls attention to the fact that in 1906–07 less than one-third of the students in that School were of New England nativity, and that nearly one-sixth were foreign born. An examination of the sixth table in his report (p. 131) shows that the percentage of students in the Graduate School of Arts and Sciences born in New England has distinctly declined during the last eight years, and that the percentage of students born in foreign countries has increased. These facts illustrate the wide range of the educational service which this Department of the University is rendering.

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It has been a common opinion that the Harvard Divinity School was better adapted to train theological scholars than parish ministers, that many of its graduates never entered the ministry at all, and that, notwithstanding its non-sectarian quality, nearly all of its students who did enter the ministry were called to Unitarian pulpits. This opinion flies in the face of the facts. The Dean of the School reports (p. 145) that a thorough examination into the subsequent history of the men who have been students in the School during the past ten years, made by the Secretary of the Faculty, "shows that of the 49 students who have received our degree, 36 are now in charge of parishes, 3 are ordained ministers temporarily without settlement, 4 are teachers in theological schools, 2 are engaged in philanthropic work, 2 are still students, one is unaccounted for, and only one is in an occupation not related to the work of the ministry. Of the 180 who have been students at the School, but have not taken our degree, . . . 114 are now in charge of parishes, 6 are teachers in theological and 26 in other educational positions, 7 are ministers at present without settlement, 7 are still students, 3 have entered philanthropic work, 4 are unaccounted for, and 13 have entered unrelated occupations. Of the graduates who entered the active ministry, 65 per cent. were called to Unitarian churches, and 35 per cent. to churches of other denominations. Of the non-graduates, 38 per cent. were called to Unitarian churches, and 62 per cent. to churches of other denominations." This valuable investigation proves that the students of the School become as a rule parish ministers. Their distribution among 12 different denominations is what might be expected from a successful non-sectarian School.

There is always a large interchange of instruction between the Faculty of the Divinity School and the Faculty of Arts and Sciences. In 1906–07, Divinity students made 56 elections of courses offered by the Faculty of Arts and Sciences, and students of Arts and Sciences made 302 elections of courses offered by the Divinity School.

The Summer School of Theology was highly successful in 1907, the attendance being the largest since the first session of the School in 1899; 92 men and 11 women were registered in it.

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Edward Henry Strobel, Bemis Professor of International Law, who had been absent for about three years in the service of the King of Siam as General Adviser, resigned his Professorship to take effect November 26, 1906, with the intention of remaining for several years more in the service of Siam. The Corporation accepted this resignation with regret, but with satisfaction that Professor Strobel was exchanging his Professorship for a mission offering unique opportunities of public usefulness. Temporary arrangements were made with Professor George Grafton Wilson, of Brown University, for giving a course on the elements of international law in the second half-year; but the Bemis Professorship has not yet been filled. The express desire of the founder of this Professorship, that the incumbent should have had experience abroad in the public service, causes unusual difficulty in filling the Professorship appropriately.

The year was an interesting one for the Faculty of Medicine, because it was likely to decide the question whether the School could live satisfactorily in its new buildings without incurring an annual deficit. The accounts of the year showed that the estimates of the cost of living in those buildings, made in 1901, before the construction of the buildings was begun, were reasonably accurate, and that the total expense of living in the buildings for the year 1906–07 did not equal the estimated annual cost. It was not possible, however, to close the construction account during the year, because of certain changes, adaptations, and additions which experience in the use of the buildings suggested; and that account is not yet closed, because of some additional work which was not completed at the opening of the current year.

The Corporation decided to charge the construction of the power house ($278,052.56) to that portion of the Henry L. Pierce Residuary Bequest which they had attributed in 1902 to the Medical School undertaking; and they propose to place a tablet in the power house to commemorate this application of a part of that great unrestricted Bequest.

The Corporation further voted to apply to the construction of the new buildings the income, up to the 1st of August, 1907, of the million dollars which they received from Mr. John D. Rockefeller, and to apply the income accrued up to the same date of the

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Robert C. Billings Fund, attributed by the Corporation to the Medical School undertaking, to the general account of the Medical School. They applied also to real estate and construction at the new Medical School the unappropriated proceeds of the sale of the former Medical School estate on Boylston Street, with the interest thereon to the 1st of August, 1907. These dispositions having been made, it appeared that there remained for endowment purposes the whole principal of the John D. Rockefeller gift ($1,000,000), and the whole principal of the Robert C. Billings Fund in the Medical School ($100,000), and that a substantial portion ($71,947.44) of the principal of the Henry L. Pierce Residuary Bequest appropriated to the Medical School undertaking still remained. Thereupon the Corporation voted that the principal of the John D. Rockefeller gift, namely, one million dollars, be held from August 1, 1907, as an endowment for the Medical School under the name of the John D. Rockefeller Fund. The unused balance of the Henry L. Pierce Fund in the Medical School is to be held to pay for future additions to the power house, when the hospitals which have bought land in the immediate vicinity of the Medical School shall be ready to take heat, light, and power from the School's power house.

The account of the Medical School for the year 1906–07 gave a satisfactory answer to the serious question — can the Medical School with its present endowment live in a creditable way in its new buildings? The receipts for the year were increased by two large items which will not recur, namely, accrued income from the R. C. Billings Fund to the amount of $24,583.32, and a balance of accrued income on the H. L. Pierce Fund appropriated to the Medical School, not used for purposes of construction, to the amount of $10,869.93. These two unusual items added together amounted to $35,453.25. This large sum was a resource for 1906–07 which will not be available again. There will, however, be available for the first time during the current year, and in succeeding years, the income of the John D. Rockefeller Fund of $1,000,000 and the income of the R. C. Billings Fund of $100,000; and these two Funds together will probably yield, for the present at least, $50,000 a year. The considerable charges incurred for moving from the Boylston Street building to the new buildings (about $6000) will not recur. More-

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over, the new endowments for Professorships in the Medical School were not fully used for the appropriate salaries in the year 1906–07; so that the School will gain some further advantage from these endowments during the current year. On the whole, therefore, the outcome of the year 1906–07 was a favorable one with reference to the adequacy of the present endowment of the School to support the great cost of living in the new buildings. Down to August 1, 1907, the buildings, including grading, terraces, and tunnels, had cost $2,621,026.07; and the land retained for the uses of the School had cost to the same date $296,912.16. The Medical School has issued from its serious undertaking in possession of admirable buildings thoroughly adapted to their uses, and with a permanent endowment which will enable it to live comfortably in the buildings, to restore salaries which had to be reduced from 1902 in consequence of the unexpectedly heavy reduction in the number of the students, and to increase its activities in both its lines of work — instruction and research.

The maximum number of students in the Harvard Medical School was 605, attained in 1901, the last year in which one could enter the School without possessing a degree in Arts or Science. The number rapidly and continuously declined, until it reached 287 in the year 1905–06. From that minimum it has risen to 320 in 1906–07, and 343 in 1907–08. The Faculty may reasonably anticipate a slow return towards the average number of the years 1896 to 1900, namely, 565.

Two existing Professorships in the Medical School were satisfactorily endowed during the year under review — the Professorship of Dermatology by the family of the late Edward Wigglesworth, M.D., who was associated with that department of instruction for nine years, and a Professorship of Otology by Francis D. Lecompte, in memory of the late Walter Augustus Lecompte, his nephew, a graduate of Harvard College in 1893, and of the Harvard Medical School in 1897.

There is no more desirable gift to a university than a fund to endow a professorship; and there is no more desirable memorial in all the world. From the point of view of the university, it ensures the teaching of some important subject so long as the university stands. A named professorship is always an object of desire among university teachers; because in the course of

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centuries each holder of a named professorship is associated with a long list of worthy men who have been faithful and honored in their day. Thus, the Hollis Professor of Divinity of to-day is associated with men highly valued in their day, who held the office between 1721 and 1840; while the Hollis Professor of Mathematics and Natural Philosophy finds himself associated with six former incumbents of the chair. The present incumbent of the Smith Professorship of the French and Spanish Languages and Literatures finds himself to be the successor of George Ticknor, Henry Wadsworth Longfellow, and James Russell Lowell; and yet the Professorship is only ninety years old. Again, from the point of view of the family or friends who erect such a memorial, the endowed professorship is a source of unfailing satisfaction; because the memorial serves the succeeding generations of students with unbroken continuity and an intellectual inspiration to which the variety inevitable in successive generations of teachers only adds force.

The Medical School made several advances during the year under review. A laboratory of surgical research for special students was established, an example which has been followed later by the Department of Clinical Medicine. A long course of free public lectures was given on Saturday evenings and Sunday afternoons, the object being to give open lectures at the School on a wide range of medical subjects in a manner intelligible to non-professional hearers, and likely to inform the public on important topics in sanitation and contagion, on the possibilities of medical and surgical aid, and on the progress of preventive medicine. The administration of the libraries was greatly improved at no little cost; and in consequence of these changes important gifts of books have been made to the working libraries of the School. Students and instructors alike enjoy the advantages of the new library administration.

The appointment of Dr. Otto Folin as Associate Professor of Biological Chemistry in June last, indicates the purpose of the Medical Faculty and the Governing Boards to rebuild the Chemical Department of the Medical School on a somewhat new plan. Much that was formerly included under the Chemical Department of the Medical School has gone over to the laboratories for Clinical Medicine, maintained in the hospitals and the Medi-

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cal School, while the Toxicology formerly included in the Chemical Department has been dropped. The present purpose is to develop the chemistry of the vital processes in health and disease, or, in other words, to study the chemical changes in living bodies under normal conditions, and also in the presence of ferments and toxins, animal or vegetable, and of anti-toxins. The new Department will be closely affiliated with that of Physiology on the one hand and that of Pathology on the other.

The report of the Dean of the Medical School (p. 159) gives a complete view of the varied activities of the School as a place of medical and surgical research. The Warren Museum has been re-arranged on a classification based on aetiology, many of the specimens have been mounted or remounted for their better preservation and display, and the labelling of the Museum has been greatly improved.

The choice of elective work by the students of the fourth year, p. 178, shows that the students cling to the traditional subjects of medical instruction, namely, anatomy, clinical medicine, children's diseases, surgery, and obstetrics. The number of choices made of these several subjects varies from 42 to 113, whereas the number of choices in no other subject rises above 19.

The summer courses and the graduate courses may be said to hold their own. In the graduate courses, the individual student does not take so many different courses as formerly, because the courses are now longer and more thorough. In the summer courses the number of laboratory courses chosen declines, while the number of clinical courses attended increases. Neither of these departments of the Medical School is as yet organized and carried on in a way to develop its greatest public usefulness. Both need to be overhauled, and adapted to the changed conditions of study and practice under which medical students and practitioners seek extra or additional instruction.

The report of the Dean of the Dental School (p. 183) brings out clearly the fact that the scope of dental instruction and of dental practice has widened much in late years. The variety of cases treated in the dental clinics, and the variety of the services rendered to patients in the infirmary, increase from year to year. Fractured jaws and cleft palates are frequently treated,

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and new materials are brought into use, such as porcelain inlays and tips, gold inlays, and carved teeth.

There has been during the past two years a considerable loss of students in the School, which the Dean thinks is largely due to the advanced entrance requirements. It is probable that the School will now slowly recover from the effects of these increased requirements; but a new building is necessary in order to restore the prosperity of the School. The School has occupied the old building on North Grove Street since the Medical School left it; but that building is remote, unattractive, and not well adapted for the uses of the dental infirmary.

The Committee appointed by the Board of Overseers to visit the Bussey Institution studied carefully during 1906–07 the condition of the Institution, and the range and the quality of the instruction there provided. Near the end of the summer they sent in an admirable report, which suggested three different modes in which the School might be reorganized. No one of the plans, however, commanded the assent of the entire Committee.

The special investments in Boston real estate belonging to the Bussey Trust have been changed and on the whole strengthened during the past three years; but the net income to be derived from them, applicable at the Bussey Institution, is only about $7500 a year. Of this sum $1800 is pledged to instruction in Horticulture. There remains only enough to pay the salary of one Professor, and to provide a moderate appropriation for the maintenance of his laboratory. In the minds of the Visiting Committee and of the President and Fellows there seems to be an agreement that this one Professor should be an expert in Entomology; since means of defending the crops or products of agriculture, horticulture, and forestry against noxious insects are the greatest need to-day of these three great interests. Such a Professor would necessarily give a large part of his time to research, and the rest to the training of advanced students. It is in contemplation to provide, chiefly at Cambridge, but partly at the Bussey Institution, for a thorough undergraduate course preparatory to the occupation of the farmer, just as there are already provided at Harvard College and the Bussey Institution courses preparatory to the callings of Forestry and Landscape

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Architecture. It is hoped that a scheme of this nature can be devised which will fully utilize all the resources of the Bussey Institution, raise the whole level of its work, and contribute to the diffusion of good agricultural instruction and intelligent agricultural practice.

During the year 1906–07 an addition to Gore Hall was made on the north side of the large wing built in 1876 to supply a new stack, new workrooms, and a catalogue and delivery room. This addition was about 94 by 25 ft. in area, and its external walls above the basement were constructed of concrete blocks. The construction was begun in the autumn of 1906, and was finished, with the exception of some interior fittings, by December, 1907. With its fittings and furniture, the addition will cost nearly $45,000; but, on the whole, the construction must be regarded as an economical mode of supplying the new rooms and the new facilities for conducting the work of the Library. The construction is also interesting as an experiment on enlarging Gore Hall by an extensive use of concrete walls, gradually enveloping nearly the whole of the original building, without destroying any part thereof, or interfering with its continuous use. Plans have been prepared by Professor H. Langford Warren for a great enlargement of the Library, as regards both stacks and reading-rooms, which would bring the south front of the building forward nearly to the north front of Boylston Hall. This enlarged building would hold quite as many books as ought ever to be stored within the College Yard, and would also provide ample reading-rooms, work-rooms, and rooms for small classes which might advantageously hold their meetings within the walls of the Library. This plan could be executed by the process of successive additions, without calling for a very large expenditure at any one time. The addition made in 1906–07 has, therefore, a high value as indicating a practicable policy for the future in enlarging the Library, and a good material to use in such enlargement.

It was the Visiting Committee for the Library, appointed by the Board of Overseers, which brought about the execution of this instructive piece of work, towards which the Committee provided $15,000, or rather more than a third of its cost. The rest of the cost is to be taken from an anonymous fund called in

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the Treasurer's Statement the "Gift for a New University Library Building."

The endowment received under the will of the late Mrs. Sarah E. Potter (about $196,000) taken with the earlier endowments called the Asa Gray Professorship Fund, the Asa Gray Memorial Fund, and the Robert Charles Billings Fund will hereafter provide the Herbarium with an assured income. It is thus definitely placed on a permanent footing, as every such scientific establishment should be, in order that its work may be planned far in advance and may be steadily prosecuted through years of unremitting, well-directed labor. The next need of the Herbarium is a new building; but this building should be planned and constructed with a view to bringing together under one roof all the sections of the Botanical Department. The Curator of the Herbarium acknowledges anew the great obligations of the establishment to the Overseers' Visiting Committee, of which Mrs. Potter was an interested and active member.

All persons who remember the great contributions made by Asa Gray to Botanical Science will rejoice that the Herbarium which he founded, and which bears his name, is now sure to maintain its high rank among similar establishments.

One of the contributions of the University to the great subject of Economic Botany is the supervision given by the Director of the Botanic Garden to the experiment station in Cuba, which is conducted on the sugar estate of Mr. Edwin Farnsworth Atkins, and at his expense. Mr. Atkins has made it possible to conduct there on a large scale difficult experiments, the results of which may be imperilled in any season by unfavorable weather, and at the best are likely to remain for several years in doubt. The station has lately obtained a striking success in its experiments on cane seedlings. The Director remarks that "the cane seedlings are proving good in every way, and the last are the best." The range of tropical and sub-tropical species cultivated at this station is being constantly widened. This coming winter renewed attempts will be made to bring in the new caoutchouc plants, and also to begin the study of certain new varieties of cacao.

The Director of the Arnold Arboretum announces (p. 231) that the preparation of the ground for the type collection of hardy

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shrubs has been finished, and the collection planted in nearly a mile and a half of beds ten feet wide.

A special subscription was raised in order to begin during the year the systematic study of the trees and shrubs of Central and Western China, a mountainous region with a climate similar to that of the Southern Appalachian region of North America. The Director states that this is the only part of the world remaining botanically unexplored, the trees of which may be expected to flourish in the northern United States, and that results of scientific and practical value may be expected from the study of the region and from the introduction of its plants into American and European plantations. Seeds for a large number of plants new to cultivation have already been received from the collector in charge, and there is every reason to hope that this new enterprise will prove to be one of the most useful pieces of work undertaken by the Arboretum.

The diminution in the number of students following the prescribed four-year courses of the Lawrence Scientific School reduced somewhat the resort to the laboratory courses in the Division of Chemistry. The number of laboratory courses offered has been greater during the past four years than in the preceding years. The number of research courses offered has increased from four in 1895–96 to six in 1906–07, and the annual elections of such courses have increased from seven to twenty-seven within the same period. Since the number of elections of laboratory courses is not now quite so great as it was two or three years ago, the pressure on the laboratories has a little diminished; but still Boylston Hall is overcrowded, and a new modern laboratory for Chemistry is one of the urgent needs of the University.

The Division of Engineering has been temporarily somewhat inconvenienced by the transfer of the S. B. degree from the Lawrence Scientific School to Harvard College; but the organization of the Graduate School of Applied Science will unquestionably prove of great ultimate advantage to this Division. Already the Chairman of the Division recognizes (p. 248) that the single Committee on Admission which has been for two years acting on all applications for admission to the College and to the Scientific School

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has enforced improved entrance requirements more uniformly, and thereby secured an improvement in the quality of the students who enter the University with the intention of pursuing a scientific profession. He has observed a noticeable improvement in the preparation of the students, which has made the "teaching of Engineering much more satisfactory." The Chairman also states that the number of students who are working toward an engineering degree has increased.

Two unrestricted gifts to the Observatory of $5000 each have permitted a considerable extension in the work of publication, and a moderate increase in the number of competent assistants employed in the study of the great collection of astronomical photographic plates. The Director remarks (p. 258), — "The amount of valuable material contained in these plates is indeed vast. Every day examples occur of the ease and economy with which astronomy may thus be advanced. An admirable field of work for women has been opened, and a great increase in the number now engaged in this work is much to be desired." As an illustration of this statement the "Second Catalogue of Variable Stars" by Miss Cannon may be cited, the most complete work of its kind yet published. Of the 3,748 known variable stars, 2,909 have been discovered at the Harvard Observatory. Again, Vol. 60 of the Annals of the Observatory, No. 4, gives accurate positions of 1,777 variable stars discovered by Miss Leavitt in the Magellanic Clouds, and No. 5 of the same Volume is a Memoir on Ten Algol Variables discovered and discussed by her.

The Library of the Observatory — one of the finest of its kind in the world — is in constant danger of destruction by fire, being scattered through the rooms of the Observatory which is in the main a wooden building. A fire occurred in the residence on March 4, 1907, which would have destroyed the entire structure, together with the east wing, but for the efficiency of the fire department of the Observatory. A moderate sum would erect for the Library an extension of the detached fireproof building now used for storing the photographic plates.

The Curator of the Museum of Comparative Zoölogy calls attention (p. 262) to the permanent value of Louis Agassiz's three

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ideas, on which the arrangement of the Museum was based,— first, synoptic collections exhibiting the principal types of form and structure; secondly, systematic collections with extensive series of typical specimens; and thirdly, faunal collections to illustrate the geographical distribution of the animals of the land and the sea. These ideas "have the same interest and importance they had when the Museum was founded in 1859, and have given the Museum an individual character of its own." It is well to recall in this hundredth year from the birth of Louis Agassiz the indebtedness of the Museum to his genius.

A new series of specimens of bird architecture has proved to be of great popular interest, although as yet it is limited in extent. Several much interested experts have contributed to the formation of this instructive exhibit.

An admirable model of Bora Bora, the most striking of the Society Islands and an excellent type of the structure and formation of the coral reefs of that group, executed by Mr. George Carroll Curtis, who spent several months on the Island in 1900 at the instance of Mr. Agassiz, has been presented to the Museum by Mr. Agassiz.

The collections were improved and enriched in many directions during the year under review. The valuable library continues to grow at the rate of about a thousand volumes and nearly two thousand pamphlets a year. The rate of publication of the Memoirs and Bulletin is fully maintained.

A beginning was made in February and March last of providing free illustrated lectures on popular scientific subjects at the University Museum. The lectures were given on Sunday afternoons at 3.30 o'clock, and were open to the public. The subjects treated were all related to existing exhibits in different parts of the Museum; so that the auditors could subsequently find in the Museum itself ample illustrations of every lecture. The subjects were as follows:—

(1) Meteorites, (2) The Ancient People of Yucatan, (3) Why the Earth is believed to be Millions of Years Old, (4) Tropical Plants, (5) Volcanoes, active and extinct.

These lectures were so successful that it is intended to give another series during the present year.

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The Chairman of the Department of Geology and Geography reports (p. 274) that the demand for graduates of the Department to take positions in the United States Geological Survey and to teach geology and geography in other institutions was greater at the close of the year than the Department could supply. The Survey and the colleges usually prefer, however, young men who have obtained a Doctor's degree; and many meritorious young men lack means of support for so long a period of training. To such men scholarships or assistantships are indispensable aids. Many excellent students prefer assistantships to scholarships. This preference suggests that the endowment of assistantships in one or more departments of instruction would be an excellent form of educational endowment.

The Chairman of the Division of Mining and Metallurgy gives (p. 286) a demonstration that nearly 90 per cent. of the graduates of this Department, which was established only in 1895, "are continuing in the work for which they were trained, and that a fair proportion of them have already reached executive positions of responsibility. On the financial side, when it is considered that the average age of these men is about twenty-seven years (the oldest being not yet thirty-four), and that they have been at work on the average only a little more than four years, it is clear that they have done well,— probably decidedly better than the average young doctor or lawyer, and unquestionably better than the average young graduate in other branches of engineering." He prints in evidence a table of the earnings of 26 graduates who are earning from $1000 to $5000 a year.

Mining is a highly organized industry requiring large associations of men and capital, and a complex organization, and it is not a Massachusetts, or even a New England, industry on any large scale. Nevertheless, this Division of the University has already become distinctly successful from every point of view, and has demonstrated its success.

For twenty years explorers and collectors in North, Central, and South America have been zealously contributing to the stores of the Peabody Museum, — some of them employed by the Museum, and others by friends and supporters of the Museum,

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and others again, moved by personal interest in anthropology, giving the fruits of their own labors in the field. The original building has once been enlarged; but there is urgent need of another enlargement which would close the gap between the present building and the southern corner-piece of the University Museum. The gap is one hundred feet long; so that large accommodations of various sorts would be obtained, such as more exhibition rooms and work-rooms, a laboratory, a lecture-room, and a proper library-room. The Museum works in a field which will soon be exhausted. It is for this generation to complete and arrange systematically collections to illustrate American archaeology and ethnology; for future generations will not have the like opportunities.

Experience has proved that the collections of the Fogg Museum of Fine Arts are not to be confined, as was originally proposed, to reproductions and prints, but are to include precious original objects, such as statues, paintings, vases, and metal work. Thus, in November, 1906, the Museum received an admirable painting by one of the most important Flemish masters of the 15th century — a characteristic and beautiful specimen in excellent condition. It also received an ancient statue of Aesculapius in marble. For the exhibition of such objects, the present building was not designed, and is not well adapted; so that there is already need of additions to the building.

The Dean of Radcliffe College reports the completion and occupation of a second hall of chambers, and the completion of the new library building. The College has made much progress in recent years towards the possession of a liberal area of land and an adequate number of suitable buildings. Endowments, the income of which is applicable to teachers' salaries, are the next acquisitions which the friends of the College must desire for it.

The Stillman Infirmary continues to be very useful, particularly for the treatment of the somewhat numerous surgical cases to which the rough athletic sports give rise, and for the isolation of contagious diseases. Among the surgical cases it is to be observed that a relatively large percentage are injuries and septic wounds

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of the knee, ankle, and foot. There was no serious epidemic among the students of the University during the year. Diphtheria, which was the principal contagious disease in 1905–06, appeared at the Infirmary with only four cases in the year under review; and mumps was the only contagious disease which appeared in more than twenty cases. In a total of 467 medical and surgical cases at the Infirmary there was but one death, and that was from cerebro-spinal meningitis — a disease for which any hopeful treatment is yet to be discovered.

The service of the Stillman Infirmary to the University it would be hard to overstate. It has relieved the administrative officers from constant anxiety about sick or injured students, and from no little labor in securing proper care for them; for a small annual fee it insures to every student in Cambridge the best possible care in case he is sick or injured; and it gives parents who live at a distance the assurance that if their sons fall ill, or are injured, they will immediately receive under the most favorable conditions the best treatment that medical or surgical skill can give.

An interesting experiment was tried in Memorial Hall from June 27 to August 9, 1907, for the purpose of accommodating members of the Summer Schools, and other registered members of the University. Cereals, bread, rolls, cake, soups, and a selection of vegetables were offered on the American plan at seventeen cents a meal; while meats, fish, eggs, salads, fruit, tea, coffee, chocolate, milk, lemonade, and desserts were offered at prices just sufficient to cover their cost and the cost of the service. These latter articles were to be paid for only when ordered. This plan gave satisfaction to the persons who used the Hall; but caused a loss of $3884.62 to the College, because the number of persons who made use of the Hall was insufficient to meet the cost of running so large an establishment. This is the second summer in which it has proved impossible to carry on Memorial Hall without loss as a restaurant for a few hundred persons whose attendance is not regular. In earlier years it was found impracticable to carry on Randall Hall for Summer School students; so that it will be necessary to close both Halls in summer until existing conditions have been materially modified.

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A university which desires for the benefit of its students to win and maintain a resort to it from all parts of a continental national territory needs some administrative officers who study the question — how the facilities and capacities of the university may be brought to the knowledge of young men all over the country, or of their parents and teachers. This study is a difficult one; but the best opinion is that knowledge of Harvard University, or of any one of its Departments, is best spread through former members of the University, and that circulars and advertisements are comparatively ineffective. Thus, 360 persons, mostly teachers, who were members of the Summer School in Arts and Sciences in 1907, answered the question — how they first heard of the Harvard Summer School. Two-thirds of them heard about it from a former member of the University, a friend who knew about the University, or through a reply received from a Harvard official to a direct inquiry. Only 15 per cent. heard of the Summer School through a circular sent from the University, an advertisement, or a news item in a periodical. The inquiry was undertaken because the Harvard Summer Schools have felt keenly the competition of the numerous summer schools established elsewhere within recent years. Thus, five years ago, 84 students from Maryland, Missouri, and Texas attended the Harvard Summer School; in 1907 there were but 14 students from those States. Other summer schools have acquired the influence and the opportunities of service which Harvard has lost. It is obvious that the good-will and active advocacy of its graduates and students are the best sources of any university's prosperity as regards both pecuniary resources and number of students.

A modification of the scheme under which Randall Hall is conducted was made by the President and Fellows on the 27th of May; the title Manager was substituted for the title Steward, and in the following definition of the powers of the Manager, the words "except the Auditor" were substituted for the words, "other than students." The new definition is as follows: "The Manager shall make all purchases of provisions for the Association, shall order all urgent repairs, shall employ and direct all employees, except the Auditor, and shall have general care of the Hall."

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The last few years have repeatedly illustrated the advantages of carrying on Memorial Hall and Randall Hall under two different schemes. If a mistake in judgment is made by the Directors of one Hall, the other Hall usually profits by it; and many of the students who are dissatisfied with one of the Halls resort forthwith to the other. The cost of board at Memorial Hall is, on the average and in the long run, higher than in Randall Hall; because the range of weekly cost between the lowest and the highest charges to members is much greater at Memorial Hall. Accordingly, in any period of business depression and family retrenchment, Randall Hall will gain and Memorial Hall is liable to lose members. The heavy debt of the Association using Memorial Hall, a debt chiefly incurred in 1905 in reconstructing the kitchens, store-rooms, and serving-room, and replacing nearly the whole equipment of the Hall, is a severe handicap for the Association to carry, although the annual payment for reduction of the debt is a small one, — so small indeed that the debt will, in all probability, not be extinguished within the life of the new "plant." An endowment which would extinguish the debt (about $170,000) in — say — twenty years, and leave a permanent maintenance fund of $50,000, would secure the life of a very helpful and democratic institution, the Harvard Dining Association.

In general, the plan for charging at the rate of $20 per course for courses taken in addition to the number prescribed in any year, — namely, five in the Freshman year and four in any other year, — worked smoothly in 1906–07, and without raising doubts or objections in the minds of either officials or students. On two points, however, additional regulations proved to be needed. In the autumn of 1906, the question arose in the Bursar's office as to the fees for additional courses to be charged Freshmen who had anticipated some College studies, as, for instance, English *A*. Were such Freshmen to be allowed to take five courses without extra charge, when four courses were all that were required of them? To meet this difficulty the President and Fellows adopted a rule that Freshmen be charged at the rate of $20 a course, in addition to the general tuition fee of $150, for each course or half-course taken in addition to the amount of work prescribed in each individual case. At the same time the Corporation voted

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that laboratory instruction which counted for more than one course toward a student's degree, whether research work, or instruction primarily for graduates, or for undergraduates and graduates, should be charged for at the usual rates for as many courses as should represent the amount of time devoted to the subject by the student, and that in estimating this time it should be assumed that all of the student's working time, not devoted to other specified and accepted courses or occupations, was given to this instruction.

On Commencement Day a gift was announced of $100,000 from the Class of 1882 on the celebration of the 25th anniversary of their graduation, the income to be used at the discretion of the Corporation "for the general purposes of the College." In the present state of the College finances, there can be no question that the income of this very welcome fund will be appropriated to College salaries.

By vote of the Corporation on the 27th of May, twenty-five University Scholarships, all with an income of $150 each, were added to the fifteen such Scholarships already existing in the Graduate School of Arts and Sciences. It is the desire of the Corporation that these new Scholarships should be used to promote the resort to the Graduate School of students who have received their first degree at other colleges, and particularly of students who come from the more distant parts of the country, and have demonstrated their capacity and character at the institutions which they have previously attended.

The Corporation having observed that the friends of the University are sometimes solicited to give money simultaneously for several different objects, thereby creating a conflict of benevolences, and are sometimes asked to contribute to the promotion of objects which the Corporation have not had opportunity to consider, adopted on the 25th of February, 1907, the following vote: —

*Voted*, That those who propose to ask the general contribution of the friends of the University for the erection of a building, or for any other purpose, are earnestly requested to confer with the Corporation, and to obtain its approval before subscriptions are asked. The generosity of the givers will thus be made most helpful.

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It was far from the intention of the Corporation to dampen the zeal of friends who desire to promote the cause of education through Harvard University. They only desired to avoid conflicts between differing, simultaneous proposals, and to obtain early information themselves about every movement to raise money for the University by the general contributions of its friends.

Some good friends of Harvard College have manifested a strong desire to experiment in Cambridge on the introduction of the English college system, whereby a group of students are lodged together in chambers around a pleasant, open court, and are provided with a chapel, dining hall, common rooms, and perhaps a library of their own, and there live in close contact with a warden, or master, and a group of older students called fellows. It is apparently an essential feature of this English method that the group of associated teachers and fellows should hold property of their own, and, therefore, have a tolerably independent corporate existence; and this feature of the English system it would be very difficult to introduce into Harvard University, whose whole property is held by a single board — the President and Fellows. Nevertheless, the George Smith Bequest seems to offer a chance to try an experiment on a group of halls which might be placed in charge of a master supported by holders of fellowships, and might provide for the students that live there common rooms, a dining hall, and a reading room. The will of George Smith, of St. Louis, provided as follows: —

"All the rest and residue of my estate, real, personal, or mixed, or wheresoever situated, I give, devise, and bequeath to Harvard University of Cambridge, Massachusetts, my alma mater, for the following purposes, to wit: to build on a rectangular plot of ground, owned by said University, three dormitories of equal size and cost, one to be inscribed 'The James Smith,' one the 'Persis Smith,' and one 'The George Smith Hall.' Said fund to be securely invested by said University, and the accruing income to be added to the principal until said principal fund reaches the sum of $450,000, when it shall be invested by said University in the above-named three dormitories."

The balance of this fund on the 1st of August, 1907, was $310,151.24, and the fund is chargeable with an annuity of $900.

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In seven or eight years the fund will probably reach its limit of $450,000.

In the meantime, the following questions might be under consideration: —

(1) Should this group of dormitories be fenced and barred in the English fashion, and the English "gateing" method be adopted for it? (2) Would American students choose to live in a quadrangle thus arranged? (3) Should any provision be made for a chapel and religious services, and if so, who should pay the cost of that establishment? (4) Should the students living in these halls receive instruction from the warden and fellows who also live there, and if so, who should pay for that instruction? In other words, should the attempt be made to imitate here the relations — pecuniary and friendly — of an English undergraduate to his college tutor? These questions certainly present considerable difficulty.

On the 25th of June the Corporation authorized the President to enter into an arrangement with the University of Lyons whereby an accredited graduate from that University might be admitted to the Graduate School of Arts and Sciences without payment of any tuition fee, it being understood that a similar privilege would be offered in exchange to a graduate of Harvard University by the University of Lyons. It is obvious that exchanges of this sort might be multiplied with mutual advantage to the co-operating universities. From the pecuniary point of view they amount at Harvard University to an increase in the number of University Scholarships in the Graduate School. The University of Paris and Harvard University have made a similar exchange for several years past with advantage; but in this case the young men who represent each University at the other, hold Fellowships, and may be called upon to give some instruction.

In October, 1906, the Corporation received through the President a memorandum entitled a "Plan for the Removal of the Andover Theological Seminary to Cambridge," the memorandum proceeding from a Committee of the Trustees of Phillips Academy. The President was instructed to lay the memorandum before the Harvard Faculty of Divinity for their consideration.

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The Faculty duly considered the memorandum; and an interchange of views resulted between the Faculty and the President and Fellows on the one hand, and the Committee of the Trustees of Phillips Academy and some members of the Faculty of Andover Seminary on the other. It later appeared that the plan which resulted from these conferences was not capable of legal execution, and was, moreover, not agreeable to the alumni of the Seminary. In consequence the negotiation was abandoned before the end of the year.

The deficit of 1906–07 in the combined accounts of the University, College, Scientific School, Graduate School of Arts and Sciences, and Library, was $16,713.64 against $59,296.31 in 1905–06, a material reduction due, not to diminished outlays, but to increased receipts. These increased receipts were derived from several sources: first, from the fees for courses which students elected in addition to the number of courses required of them; secondly, to a better renting of college rooms; thirdly, to a small increase in the number of students in the Departments named; and fourthly, to a slightly higher rate of interest on the general investments. It seems probable that the fees from additional courses will prove to be a valuable resource, until the number of courses required for the degree of Bachelor of Arts or Bachelor of Science shall be a little reduced, and three years shall be the usual accepted residence for either of these degrees. When that time comes, the only way to keep the total of tuition-fees up to its present level will be to increase slightly the yearly fee of $150. This advance has already been made for students who follow the old four-year programmes in the Lawrence Scientific School. The Corporation will charge the deficit of the year to the Henry L. Pierce Fund, a Fund unrestricted as to both principal and income. It seems to be impossible to reduce the sum total of general expenses in this account, at least so long as wages and the cost of materials remain at their present level. The only way, therefore, to prevent the recurrence of deficits in this Department is to diminish the number of salaried places. This policy the Corporation began to put into practice two years ago, and must continue to follow.

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The attention of the Overseers and the Alumni is respectfully invited to the following Reports of the Deans of the Faculties and Schools, and the Directors of the Scientific Establishments. They are necessary to an understanding of the present activities and policies of the University.

CHARLES W. ELIOT, *President.*

CAMBRIDGE, January 7, 1908.

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# REPORTS OF DEPARTMENTS.

## THE FACULTY OF ARTS AND SCIENCES.

To the President of the University: —

Sir, — I have the honor of presenting a report on the work of the Faculty of Arts and Sciences for the academic year 1906–07.

Besides the President, the Faculty contained seventy-seven Professors, two Associate Professors, fifty Assistant Professors, one Lecturer, twenty Instructors, the Assistant Dean of Harvard College, the Recorder, and the Secretary to the Corporation, — in all one hundred and fifty-three members.

### *Instruction in 1906–07.*

With the following list of courses of instruction that were actually given under the authority of the Faculty, I print a statement of the number and the classification of the students in each course. The figures are those officially returned to the Recorder by the several instructors at the close of the academic year, and take no account of persons who, regularly or irregularly, attended the exercises and did the work of a course without being officially recognized as members of it. The abbreviations are those ordinarily used in such lists: —

### COURSES OF INSTRUCTION GIVEN IN 1906–07.

#### Semitic Languages and History.

*For Undergraduates and Graduates: —*

1. Dr. Haynes. — Hebrew (elementary course). Explanation of parts of Genesis and of the Book of Psalms. 2 Ju., 1 So. Total 3.

12. Professor G. F. Moore. — History of Israel, political and social, till the capture of Jerusalem by the Romans. 2 Se., 5 Ju., 2 So., 6 Di. Total 15.

16. Professor G. F. Moore. — History of Jewish Literature from the Earliest Times to 200 A.D. 2 Ju., 1 So., 5 Di. Total 8.

13. Professor Toy. — History of the Hebrew Religion, with comparison of other Semitic Religions. 1 Gr., 1 So., 7 Di. Total 9.

15 *hf*. Professor Toy. — History of the Bagdad Califate. Mohammedanism in Egypt and India; Mohammedan Law; The Crusades; The Korān. 2 Gr., 1 Di. Total 3.

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*Primarily for Graduates: —*

2. Professor Toy. — Hebrew (second course). Interpretation of parts of the Prophets and the Poetical Books. 1 Fr., 1 Di. Total 2.

3*b*. Dr. Haynes. — Classical Aramaic (second course). 1 Di. Total 1.

‡4. Dr. Haynes. — Assyrian. 1 So. Total 1.

‡7. Dr. Haynes. — Arabic. Brünnow's Chrestomathy. 1 So. Total 1.

‡8. Professor Toy. — Arabic (second course). The Moallakāt; Motenebbi; Ibn Ḫaldun; The Korān. 1 Di. Total 1.

## Indic Philology.

*For Undergraduates and Graduates: —*

1*a* $^{1}hf$. Professor Lanman. — Elementary Sanskrit. 1 Gr., 1 Se. Total 2.

*Primarily for Graduates: —*

‡2 $^{1}hf$. Professor Lanman. — Vedic Sanskrit. Introduction to the language and literature of the Vedas. Hymns of the Atharva-Veda, the Rig-Veda, etc. 1 Gr., 1 So., 1 R. Total 3.

‡3 $^{2}hf$. Professor Lanman. — Vedic Sanskrit. Continuation of the study of the Vedas. 1 Gr., 1 So. Total 2.

‡9. Dr. Woods. — Philosophical Sanskrit. Patanjali's Commentary on the Yoga philosophy (Yogabhāshya), with selections from the Sānkhya books. 1 Gr., 1 So. Total 2.

Course of Special Study.

‡20*c* $^{2}$. Professor Lanman. — Weekly meetings at the instructor's study for the rapid reading of Sanskrit or Pāli texts. 1 Gr., 1 So., 1 Instr. Total 3.

## The Classics.

*Primarily for Undergraduates: —*

### Greek.

*G*. Dr. C. N. Jackson. — Course for Beginners. 2 Se., 3 So., 8 Fr., 3 Sp. Total 16.

*A*. Dr. E. Cary. — Greek Literature. Homer, Odyssey; Euripides and Aristophanes. 1 Se., 5 So., 13 Fr. Total 19.

*B*. Asst. Professor Harris, and Drs. C. N. Jackson and E. Cary. — Greek Literature. Plato; Lysias; Xenophon; Elegiac, Iambic, and Lyric Poets; Euripides. Lectures on the History of Greek Literature. 2 So., 54 Fr. Total 56.

*E hf*. Dr. C. N. Jackson. — Greek Prose Composition (first course). 1 So., 8 Fr. Total 9.

1*a* $^{1}hf$. Asst. Professor Harris. — Greek Literature. The Period of Athenian Supremacy. Herodotus; Aeschylus; Plutarch. 2 Ju., 6 So., 6 Fr. Total 14.

1*b* $^{2}hf$. Dr. E. Cary. — Greek Literature. The Period of Athenian Supremacy. Thucydides; Aristophanes; Sophocles. 5 So., 5 Fr. Total 10.

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2. Asst. Professors GULICK and HARRIS. — Greek Literature. Aristophanes; Thucydides; Aeschylus; Sophocles. 1 Ju., 18 So., 1 Sp. Total 20.

3 *hf*. Asst. Professor HARRIS. — Greek Prose Composition (second course). 1 Gr., 1 Se., 2 Ju., 8 So. Total 12.

LATIN.

*B*. Professors HOWARD and CLIFFORD H. MOORE, Associate Professor C. P. PARKER, Asst. Professor E. K. RAND, and Dr. PEASE. — Latin Literature. Livy; Horace; Terence.
1 Se., 1 Ju., 9 So., 139 Fr., 2 Sp. Total 152.

*E hf*. Asst. Professor E. K. RAND. — Latin Composition (first course). Translation of English narrative. 1 Ju., 2 So., 13 Fr., 1 Law. Total 17.

1. Professor CLIFFORD H. MOORE and Associate Professor C. P. PARKER. — Latin Literature. Tacitus; Horace; Catullus.
2 Ju., 23 So., 1 Sp. Total 26.

2*a* 1*hf*. Asst. Professor E. K. RAND. — Latin Literature. General View of Latin Poetry. 1 Gr., 2 Se., 2 Ju., 6 So., 1 Fr., 1 Sp. Total 13.

2*b* 2*hf*. Asst. Professor E. K. RAND. — Latin Literature. Tacitus.
1 Gr., 2 Ju., 6 So., 1 Fr., 1 Sp. Total 11.

3 *hf*. Professor CLIFFORD H. MOORE. — Latin Composition (second course).
1 Se., 1 Ju., 8 So., 1 Fr. Total 11.

*For Undergraduates and Graduates:* —

GREEK.

6. Professor WEIR SMYTH. — Greek Literature. Demosthenes; Aeschines; Aeschylus; Sophocles; Aristophanes. 3 Gr., 1 Se., 7 Ju. Total 11.

7 *hf*. Asst. Professor GULICK. — Greek Prose Composition (third course).
6 Gr., 2 Se. Total 8.

9. Professor ROPES. — Introduction to the Study of the New Testament. The Origin and History of the New Testament Writings; the Teaching of Jesus Christ and of the New Testament Authors.
2 Gr., 1 Se., 1 Ju., 3 So., 1 Fr., 8 Di. Total 16.

8. Professor GOODWIN and Associate Professor C. P. PARKER. — Plato; Aristotle. Survey of Greek Philosophy from Thales to Aristotle.
5 Gr., 4 Se. Total 9.

17 2*hf*. Asst. Professor HARRIS. — Greek Literature. Four Plays, with studies of their influence in Art and in the Drama of later ages. For 1906–07: Aeschylus (Choephoroe), Sophocles (Oedipus Tyrannus), Euripides (Bacchae), Aristophanes (Wasps). 1 Gr., 4 Se., 2 Ju., 3 So., 2 Fr. Total 12.

10. Asst. Professor GULICK. — The Life of the Ancient Athenians, described and illustrated by the aid of the Literature and of the Monuments.
2 Gr., 18 Se., 27 Ju., 25 So., 3 Sp., 1 Sc. Total 76.

11. Professor J. W. WHITE. — History of the Greek Drama. Lectures on the Dramatic Art and Literature of the Greeks, and on the influence of the Greek drama on Modern Literature. Aeschylus; Sophocles; Euripides; Aristophanes. 5 Gr., 39 Se., 39 Ju., 55 So., 1 Fr., 4 Sp. Total 143.

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LATIN.

6. Professor HOWARD. — Latin Literature. Suetonius; Pliny; Juvenal; Martial. 2 Gr., 4 Se., 11 Ju., 2 So. Total 19.

7 *hf*. Associate Professor C. P. PARKER. — Latin Composition (third course). 8 Gr., 1 Se., 1 Ju. Total 10.

8. Professor MINTON WARREN and Associate Professor C. P. PARKER. — Latin Literature. Cicero; Lucretius; Plautus. 3 Gr., 5 Se., 1 Ju., 1 Fr. Total 10.

14 ½*hf*. Professor MINTON WARREN. — Latin Literature. Cicero's Correspondence. 2 Gr. Total 2.

*Primarily for Graduates:* —

CLASSICAL PHILOLOGY.

‡25 ²*hf*. Professor CLIFFORD H. MOORE. — Introduction to the History of Classical Studies and to the Interpretation and Criticism of Classical Authors. 7 Gr., 3 Se. Total 10.

38. Professor J. W. WHITE. — The Comedies of Aristophanes. 12 Gr., 1 Ju. Total 13.

‡44 ½*hf*. Asst. Professor GULICK. — Thucydides. 1 Gr., 1 R. Total 2.

‡72. Professor ROPES. — The Epistles of St. Paul. 2 Di., 2 R. Total 4.

‡83 ½*hf*. Professor ROPES. — The Gospel and Epistles of St. John. 2 Di. Total 2.

‡54 ²*hf*. Professor ROPES. — The Acts of the Apostles. 4 Di., 1 R. Total 5.

68. Professor MINTON WARREN. — The Comedies of Plautus. 6 Gr., 2 Se. Total 8.

16 ½*hf*. Asst. Professor E. K. RAND. — The History of Pastoral Literature. The Classical Pastoral and the Latin Pastoral of the Middle Ages and the Renaissance. 5 Gr. Total 5.

‡41 ½*hf*. Professor CLIFFORD H. MOORE. — The Roman Historians to Tacitus. 6 Gr., 2 R. Total 8.

‡42. Professor WEIR SMYTH. — History of Later Greek Literature (the Alexandrian and Roman periods). 7 Gr., 1 Se., 4 R. Total 12.

30 ²*hf*. Asst. Professor GULICK. — Introduction to Greek Palaeography. 6 Gr., 1 Se. Total 7.

31 ²*hf*. Professor MINTON WARREN. — The Elements of Oscan and Umbrian. 1 Gr. Total 1.

‡55 ½*hf*. Professor MINTON WARREN. — Interpretation of Latin Inscriptions important for their Language or Content. 4 Gr., 2 R. Total 6.

51 ½*hf*. Professor HOWARD. — Roman Political Antiquities. 9 Gr. Total 9.

‡67. Asst. Professor CHASE. — Pausanias, with special reference to the Monuments of Delphi and Olympia. 2 R. Total 2.

64. Asst. Professor CHASE. — General Introduction to Classical Archaeology. 2 Gr., 3 Se., 1 Ju. Total 6.

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### 20. The Seminary of Classical Philology.

Professors Weir Smyth and Howard, Directors for 1906–07. — Training in philological criticism and research. Text-criticism and interpretation of Greek and Latin authors: for 1906–07, Aeschylus and Suetonius.

5 Gr. Total 5.

## English.

### English Composition.

*Primarily for Undergraduates: —*

*A.* Professors Briggs and Hurlbut, Drs. Webster, Greenough, and Hutchison, Messrs. Nutter, Stearns, Hersey, Post, L. Lewis, Brooks, Chase, Hatch, and Shipherd. — Rhetoric and English Composition.

15 So., 394 Fr., 92 Sp., 24 Sc. Total 525.

*BChf.* Mr. T. Hall. — English Composition.

2 So., 3 Fr., 8 Sp., 21 Sc. Total 34.

22. Dr. Maynadier, and Messrs. Coues and McNeill. — English Composition.

15 Se., 19 Ju., 27 So., 2 Fr., 7 Sp., 1 Sc., 1 Bu. Total 72.

31 ½*hf.* Mr. W. R. Castle, Jr. — English Composition.

2 Ju., 13 So., 17 Fr., 2 Sp. Total 34.

*D* 1 *or* ½*hf.* Mr. W. R. Castle, Jr., and Messrs. Bellows, Blake, and Stoddard. — English Composition.

4 Se., 6 Ju., 97 So., 108 Fr., 9 Sp., 3 Sc. Total 227.

18. Professor Baker and Mr. Curtis. — The Forms of Public Address.

1 Gr., 8 Se., 40 Ju., 13 So., 2 Sp. Total 64.

30 ½*hf.* Professor Baker and Mr. Curtis. — Debating.

8 Se., 7 Ju., 4 So., 1 Sp. Total 20.

*For Undergraduates and Graduates: —*

12. Mr. Copeland. — English Composition.

3 Gr., 8 Se., 7 Ju., 4 So., 1 Fr., 6 Sp. Total 29.

*Primarily for Graduates: —*

5. Professor Briggs. — English Composition (advanced course).

14 Gr., 7 Se., 6 Ju., 3 So., 1 Fr., 1 Sp., 1 Di., 1 Law. Total 34.

### English Literature.

*Primarily for Undergraduates: —*

28 *hf.* Professors Briggs, Wendell, Kittredge, and Baker, and Mr. T. Hall. — English Literature. History and Development of English Literature in outline.

1 Gr., 138 Fr., 5 Sp. Total 144.

*For Undergraduates and Graduates: —*

3a 1*hf.* Dr. Webster. — Anglo-Saxon.

15 Gr., 8 Se., 3 Ju., 1 Fr., 1 Sp. Total 28.

1. Professors F. N. Robinson and Schofield. — English Literature. Chaucer.

17 Gr., 7 Se., 1 Ju., 3 So., 2 Sp. Total 30.

2. Professor Kittredge. — English Literature. Shakspere.

25 Gr., 15 Se., 22 Ju., 23 So., 2 Fr., 7 Sp. Total 94.

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11*a* 1*hf*. Professor NEILSON. — English Literature. Bacon.
3 Gr., 15 Se., 7 Ju., 13 So., 3 Fr. Total 41

11*b* 2*hf*. Professor NEILSON. — English Literature. Milton.
6 Gr., 4 Se., 4 Ju., 15 So., 5 Fr., 2 Sp. Total 36.

32*a* 1*hf*. Dr. MAYNADIER. — English Literature of the Elizabethan Period. From Tottel's Miscellany to the death of Spenser (1557–1599).
2 Gr., 9 Se., 5 Ju., 6 So., 1 Fr., 3 Sp. Total 26.

7*a* 1*hf*. Dr. GREENOUGH and Mr. W. R. CASTLE, Jr. — English Literature of the Period of Queen Anne. From the death of Dryden to the death of Swift (1700–1745).
6 Gr., 13 Se., 23 Ju., 19 So., 5 Fr., 2 Sp., 2 Sc. Total 70.

7*b* 2*hf*. Professor BLISS PERRY. — English Literature. From the death of Swift to the Publication of the Lyrical Ballads (1745–1798).
22 Gr., 25 Se., 62 Ju., 66 So., 24 Fr., 15 Sp., 2 Sc., 1 Di. Total 217.

8*a* 1*hf*. Professor NEILSON and Dr. HUTCHISON. — English Literature. From the publication of the Lyrical Ballads to the death of Scott (1798–1832).
18 Gr., 20 Se., 27 Ju., 26 So., 9 Fr., 4 Sp. Total 104.

8*b* 2*hf*. Mr. COPELAND and Dr. HUTCHISON. — English Literature. From the death of Scott to the death of Tennyson (1832–1892).
6 Gr., 10 Se., 15 Ju., 24 So., 7 Fr., 7 Sp., 1 Sc. Total 70.

37 2*hf*. Dr. MAYNADIER. — English Literature. The Story of King Arthur.
19 Se., 27 Ju., 22 So., 2 Fr., 2 Sp. Total 72.

33 *hf*. Professor WENDELL. — English Literature. The Literary History of America. 8 Gr., 4 Se., 6 Ju., 9 So., 1 Fr., 6 Sp. Total 34.

48 2*hf*. Professor BRIGGS. — Browning.
10 Gr., 8 Se., 5 Ju., 3 So., 1 Fr., 1 Sp. Total 28.

*Primarily for Graduates:* —

19 2*hf*. Professor F. N. ROBINSON. — Historical English Grammar.
4 Gr. Total 4.

3*b* 2*hf*. Professor KITTREDGE. — Anglo-Saxon. Béowulf.
21 Gr., 1 Se. Total 22.

4. Professors F. N. ROBINSON and NEILSON. — Early English. English Literature from 1200 to 1450. Mätzner's Altenglische Sprachproben.
14 Gr., 1 Se. Total 15.

14. Professor BAKER. — English Literature. The Drama from the Miracle Plays to the Closing of the Theatres. 25 Gr., 8 Se., 2 Ju., 2 Sp. Total 37.

39. Professor BAKER. — English Literature. The Drama in England from 1642 to 1900. 6 Gr., 7 Se., 6 Ju., 5 So., 3 Sp. Total 27.

49 1*hf*. Professor NEILSON. — Shakspere. Study of Special Topics.
8 Gr., 1 Ju., 2 So. Total 11.

### COURSES OF SPECIAL STUDY.

20. The instructors in English held themselves ready to assist and advise competent Graduate Students who might propose plans of special study in the language or literature of the periods or in the topics mentioned below. Such plans, however, must in each case have met the approval of the Department.

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PERIODS.

*b*. Professor KITTREDGE. — Middle English. 1 Gr. Total 1.

*c*. Professor NEILSON. — Modern English Literature. 3 Gr. Total 3.

TOPICS.

*g*. Professor BAKER. — The English Drama: its history, and its relation to Continental Drama. 2 Gr. Total 2.

*h*. Professor WENDELL. — The Literary History of America. 1 Gr. Total 1.

## Public Speaking.

*Primarily for Undergraduates: —*

1. Messrs. HILLS and WILLARD. — Voice Cultivation.
2 Se., 4 Ju., 8 So., 12 Fr., 4 Sp. Total 30.

2 *hf*. Asst. Professor WINTER and Mr. HILLS. — Platform Speaking.
14 Se., 12 Ju., 26 So., 9 Fr., 3 Sp. Total 64.

3 *hf*. Asst. Professor WINTER and Mr. HILLS. — Masterpieces of Public Discourse. 9 Se., 6 Ju., 9 So., 4 Fr., 2 Sp. Total 30.

4 *hf*. Asst. Professor WINTER and Mr. HILLS. — Dramatic Interpretation.
1 Se., 4 Ju., 3 So., 1 Fr., 3 Sp. Total 12.

## Germanic Languages and Literatures.

### GERMAN.

*Primarily for Undergraduates: —*

*A*. Asst. Professor BIERWIRTH, assisted by Drs. COLWELL and STURTEVANT, Messrs. BRIGGS, LIEDER, and STEWART, and Dr. GOEBEL. — Elementary Course.
2 Gr., 4 Se., 5 Ju., 44 So., 235 Fr., 27 Sp., 13 Sc. Total 330.

*B*. Mr. W. G. HOWARD. — Elementary Course (counting as two courses).
2 So., 13 Fr., 6 Sp. Total 21.

*C*. Drs. BOESCHE and STURTEVANT — German Prose and Poetry.
5 So., 26 Fr., 4 Sp., 2 Sc. Total 37.

1*a*. Asst. Professor WALZ and Dr. COLWELL. — German Prose and Poetry.
1 Gr., 2 Se., 1 Ju., 36 So., 11 Fr., 4 Sp. Total 55.

1*b*. Drs. STURTEVANT and COLWELL. — German Prose. Subjects in History and Biography. 1 Gr., 1 Se., 5 Ju., 43 So., 12 Fr., 3 Sp. Total 65.

1*c*. Dr. STURTEVANT. — German Prose, narrative and descriptive.
1 Se., 3 Ju., 8 So., 7 Fr., 5 Sp., 6 Sc., 1 Bu. Total 31.

*Fhf*. Dr. BOESCHE. — Practice in speaking and writing German (first course).
2 Ju., 7 So., 5 Fr., 1 Sp., 1 Sc. Total 16.

*Hhf*. Dr. GOEBEL. — Practice in speaking and writing German (second course).
2 Se., 1 Ju., 1 So. Total 4.

2*a*. Professor VON JAGEMANN and Dr. BOESCHE. — Introduction to German Literature of the Eighteenth and Nineteenth Centuries. Lessing, Goethe, and Schiller. German Ballads and Lyrics.
1 Se., 4 Ju., 11 So., 40 Fr., 3 Sp., 1 Sc. Total 60.

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2*b*. Professor H. S. WHITE and Mr. LIEDER. — Introduction to German Literature of the Eighteenth and Nineteenth Centuries. Lessing, Goethe, and Schiller. German Ballads and Lyrics.
3 Se., 18 Ju., 27 So., 32 Fr., 5 Sp. Total 85

3. Asst. Professor BIERWIRTH. — Schiller and his Time. Der Dreissigjährige Krieg; Wallenstein; Maria Stuart; Die Jungfrau von Orleans; Die Braut von Messina; Gedichte. 1 Se., 5 Ju., 10 So., 3 Fr., 1 Sp. Total 20.

4. Asst. Professor WALZ. — Goethe and his Time. Works of the Storm and Stress Period; Autobiographical Works; Poems; Egmont; Iphigenie; Tasso; Faust. 7 Se., 22 Ju., 28 So., 5 Fr., 2 Sp. Total 64.

25 ½*hf*. Professor FRANCKE, assisted by Mr. E. H. P. GROSSMANN. — History of German Literature in outline.
29 Se., 30 Ju., 50 So., 7 Fr., 4 Sp., 1 Sc. Total 121.

*For Undergraduates and Graduates:* —

*G hf*. Dr. BOESCHE. — German Grammar and practice in writing German (advanced course). 2 Gr., 1 Se. Total 3.

6 ½*hf*. Professor KÜHNEMANN (University of Breslau). — Die Blütezeit der deutschen Literatur im achtzehnten Jahrhundert.
3 Gr., 8 Se., 3 Ju., 6 So. Total 20.

19 ½*hf*. Professor KÜHNEMAN (University of Breslau). — Das deutsche Drama der Gegenwart. 3 Gr., 6 Se., 9 Ju., 6 So., 11 R. Total 35.

26*a* ½*hf*. Mr. W. G. HOWARD. — German Literature in the first half of the Nineteenth Century. Kleist; Uhland; Heine.
2 Gr., 4 Se., 3 Ju., 1 So., 2 Sp. Total 12.

26*b* ²*hf*. Mr. W. G. HOWARD. — German Literature in the second half of the Nineteenth Century. The Development of the Novel and the Drama.
3 Gr., 2 Se., 1 Ju., 2 So., 1 Sp. Total 9.

31. Professor H. S. WHITE. — Heine's Life and Works.
5 Se., 7 Ju., 14 So., 1 Sp. Total 27.

8. Asst. Professor WALZ. — German Literature in the Twelfth and Thirteenth Centuries. Nibelungenlied; Kudrun; Hartmann; Wolfram; Walther von der Vogelweide. Translation into modern German.
4 Gr., 4 Se., 3 Ju., 2 So.. Total 13.

*Primarily for Graduates:* —

‡11*a hf*. Professor FRANCKE. — The early Romantic Movement in Germany, with special reference to the ideals of life underlying it.
4 Gr., 1 So., 2 R. Total 7.

‡12*a* ½*hf*. Professor VON JAGEMANN. — Gothic. Introduction to the study of Germanic Philology. General Introduction; Phonology.
7 Gr., 1 Se., 4 R. Total 12.

‡12*b* ²*hf*. Professor VON JAGEMANN. — Introduction to the study of Germanic Philology (continued). Morphology; Etymology. 3 Gr. Total 3.

‡15 ½*hf*. Dr. GOEBEL. — Old High German. 3 Gr. Total 3.

‡21. Professor VON JAGEMANN. — History of the German Language, with special study of selected topics. 2 Gr. Total 2.

16 ½*hf*. Professor KITTREDGE. — Germanic Mythology. 1 Se. Total 1.

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SEMINARY COURSES.

‡20*a*. Professor FRANCKE. — The Mediaeval Religious Drama. 2 Gr. Total 2.

‡20*b* 2*hf*. Asst. Professor WALZ. — G. A. Bürger and the poets of the Hainbund. 3 Gr., 1 So. Total 4.

‡20*c* 1*hf*. Professor KÜHNEMANN (University of Breslau). — Schiller's Wallenstein. 2 Gr., 2 R. Total 4.

NETHERLANDISH.

*For Undergraduates and Graduates:* —

1 1*hf*. Dr. H. DE W. FULLER. — Dutch grammar. 1 Gr., 1 So. Total 2.

SCANDINAVIAN.

*For Undergraduates and Graduates:* —

1 1*hf*. Professor SCHOFIELD. — Dano-Norwegian. An introduction to the study of the Danish and Norwegian languages and literatures. Practice in the spoken language. 3 Gr., 3 Se., 4 So., 1 Fr. Total 11.

## Romance Languages and Literatures.

FRENCH.

*Primarily for Undergraduates:* —

*A*. Mr. CHURCHMAN, and Messrs. ALLARD and BAULIG. — Elementary Course. 3 Gr., 1 Se., 1 Ju., 18 So., 67 Fr., 40 Sp., 2 Sc., 2 Bu. Total 134.

1*c*. Mr. HAWKINS. — Reading, translation, grammar, and composition. 1 So., 3 Fr., 8 Sp., 3 Sc. Total 15.

1*b*. Asst. Professor BABBITT, Dr. M. A. POTTER, and Messrs. HAWKINS and SPIERS. — French Prose, historical and general. Translation from French into English. 5 Ju., 22 So., 34 Fr., 16 Sp., 1 Sc. Total 78.

1*a*. Associate Professor DE SUMICHRAST and Mr. BRUN. — Reading, translation, grammar, and composition. 2 Ju., 25 So., 22 Fr., 11 Sp. Total 60.

2*c*. Asst. Professor MARCOU, Dr. M. A. POTTER, and Messrs. LINCOLN, BAULIG, HAWKINS, and POST. — French Prose and Poetry. Molière; Beaumarchais; Lamartine; Victor Hugo; Alfred de Musset; Balzac; Rostand. Composition. 9 Ju., 18 So., 74 Fr., 4 Sp. Total 105.

2*a*. Asst. Professor C. H. C. WRIGHT, and Messrs. BRUN and SPIERS. — French Prose and Poetry. Corneille; Racine; Molière; Victor Hugo; George Sand; Alfred de Musset; Sainte-Beuve; Rostand. Composition. 1 Gr., 2 Se., 9 Ju., 25 So., 71 Fr., 1 Sp., 1 Sc. Total 110.

3. Mr. BAULIG. — French Composition (elementary course). 4 Ju., 2 So., 1 Sp. Total 7.

4 1*hf*. Mr. BRUN. — French Composition (intermediate course). 2 Gr., 9 Se., 10 Ju., 13 So., 3 Fr. Total 37.

5 1*hf*. Mr. BRUN. — French Composition (advanced course). 1 Gr., 1 Se., 5 Ju., 3 So., 2 Fr., 1 Sp., 2 Sc. Total 15.

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*For Undergraduates and Graduates:* —

6*c*. Professor GRANDGENT. — General view of French Literature.
2 Gr., 4 Se., 4 Ju., 6 So., 1 Fr., 1 Sp. Total 18.

6. Associate Professor DE SUMICHRAST. — General view of French Literature.
1 Gr., 6 Se., 20 Ju., 44 So., 2 Fr. Total 73.

14 ½*hf*. Asst. Professor MARCOU. — French Lyric Poetry from Villon and the Fifteenth Century to the present time. 1 Gr., 1 Se. Total 2.

16. Mr. ALLARD. — The French Drama in the Nineteenth Century.
2 Gr., 2 Se., 4 So. Total 8.

7. Associate Professor DE SUMICHRAST. — French Literature in the Nineteenth Century. 2 Gr., 7 Se., 13 Ju., 3 So. Total 25.

9. Asst. Professor C. H. C. WRIGHT. — French Literature in the Seventeenth Century. 4 Se., 1 Ju. Total 5.

10. Asst. Professor C. H. C. WRIGHT. — French Literature in the Sixteenth Century. 2 Gr., 1 Se., 1 So. Total 4.

*Primarily for Graduates:* —

12. Professor SHELDON. — Old French Literature. The national Epic Poetry (the Chansons de geste). 1 Gr. Total 1.

ITALIAN.

*Primarily for Undergraduates:* —

1. Asst. Professor FORD, and Messrs. WILKINS and POST. — Elementary Course. 1 Gr., 8 Ju., 15 So., 6 Fr., 1 Sp. Total 31.

*For Undergraduates and Graduates:* —

5. Mr. WILKINS. — Modern Italian Literature. Prose and Poetry of the Eighteenth and Nineteenth Centuries.
1 Se., 1 Ju., 3 So., 1 Fr., 2 Sp. Total 8.

2. Asst. Professor FORD. — Italian Literature of the Fifteenth and Sixteenth Centuries. Torquato Tasso; Ariosto; Machiavelli; Benvenuto Cellini.
3 Gr., 3 Se., 1 Ju., 2 So., 1 Fr. Total 10.

10. Professor GRANDGENT. — The Works of Dante, particularly the Vita Nuova and the Divine Comedy. 5 Gr., 6 Se., 1 Ju., 3 So. Total 15.

SPANISH.

*Primarily for Undergraduates:* —

1. Dr. M. A. POTTER, and Messrs. LINCOLN, HAWKINS, and WILKINS. — Elementary Course. 17 Ju., 34 So., 19 Fr., 3 Sp., 1 Sc. Total 74.

*For Undergraduates and Graduates:* —

4 *hf*. Asst. Professor FORD. — A general view of Spanish Literature.
2 Gr., 1 Se., 1 Ju., 3 So., 1 Fr., 1 Sc. Total 9.

2. Asst. Professor MARCOU. — Spanish Literature of the Sixteenth and Seventeenth Centuries. Cervantes; Lope de Vega; Calderón.
3 Gr., 5 Se., 2 Ju., 4 So. Total 14.

*Primarily for Graduates:* —

‡3. Asst. Professor FORD. — Early Spanish. The Poem of the Cid. Spanish Literature to the Fifteenth Century. 7 Gr., 1 Se., 1 R. Total 9.

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### Romance Philology.

*Primarily for Graduates:* —

3. Professor Sheldon. — Old French. Phonology and inflections. The oldest texts. La Chanson de Roland; Chrétien de Troyes; Aucassin et Nicolette. 11 Gr. Total 11.

4. Professor Grandgent. — Provençal. Language and literature, with selections from the poetry of the troubadours. 7 Gr., 1 Instr. Total 8.

5 *hf.* Professor Grandgent. — Low Latin. 6 Gr., 2 R. Total 8.

6 [2]*hf.* Asst. Professor Ford. — Portuguese. Language and Literature. Old Portuguese lyric verse: Gil Vicente; Sâ de Miranda; Camões. 6 Gr., 2 Se., 1 Instr. Total 9.

### Celtic.

*Primarily for Graduates:* —

1 [1]*hf.* Professor F. N. Robinson. — Old Irish. General introduction to Celtic Philology. 4 Gr. Total 4.

2 [2]*hf.* Professor F. N. Robinson. — Middle Irish. Lectures on the history of Irish Literature. 3 Gr. Total 3.

### Slavic Languages.

*For Undergraduates and Graduates:* —

1*a*. Asst. Professor Wiener. — Russian. 1 Se. Total 1.

2*a*. Asst. Professor Wiener. — Polish. 1 Gr. Total 1.

4 *hf.* Asst. Professor Wiener. — Introduction to the History of Russian Literature. 3 Se., 1 Ju., 4 So., 3 Fr., 3 Sp. Total 14.

### Comparative Literature.

*Primarily for Undergraduates:* —

1. Professor Wendell, assisted by Dr. H. de W. Fuller and Mr. Nutter. — European Literature. General Survey. 19 Se., 13 Ju., 55 So., 23 Fr., 12 Sp. Total 122.

*For Undergraduates and Graduates:* —

6*a* [1]*hf.* Professor Schofield, assisted by Dr. Webster. — The Literary History of England and the Continent from the Norman Conquest to Chaucer. 17 Gr., 16 Se., 13 Ju., 22 So., 4 Fr., 5 Sp. Total 77.

6*b* [2]*hf.* Professor Schofield, assisted by Dr. Webster. — The Literary History of England and the Continent from Chaucer to Elizabeth. 10 Gr., 7 Se., 27 Ju., 30 So., 6 Fr., 5 Sp., 1 Sc. Total 86.

7. Dr. M. A. Potter. — Tendencies of European Literature in the Renaissance. 4 Gr., 2 Se., 4 Ju., 4 So. Total 14.

11. Asst. Professor Babbitt. — The Romantic Movement in the Nineteenth Century. 6 Gr., 6 Se., 3 So. Total 15.

12 [2]*hf.* Professor Bliss Perry, assisted by Mr. Stoddard. — Types of Fiction in the Eighteenth and Nineteenth Centuries. 11 Gr., 44 Se., 49 Ju., 51 So., 1 Fr., 9 Sp., 1 Sc. Total 166.

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8 ²*hf*. Professor FRANCKE. — Goethe's Faust; with a study of kindred dramas in European Literature. 3 Gr., 4 Se., 3 Ju., 2 So., 1 Fr. Total 13.

13 ²*hf*. Professor SCHOFIELD. — Danish and Norwegian Dramatists (especially Holberg, Oehlenschläger, Björnson, and Ibsen) and their relations to European Literature. 2 Gr., 1 Se., 2 So., 1 Fr. Total 6.

*Primarily for Graduates:* —

14. Professor SHELDON. — Mediaeval Literature in the vulgar tongues, with special reference to the influence of France and Provence. 4 Gr. Total 4.

22. Asst. Professor BABBITT. — Literary Criticism since the Sixteenth Century. 4 Gr., 1 Se., 1 Ju., 2 So. Total 8.

26 ¹*hf*. Professor KITTREDGE. — The Early English Metrical Romances. 6 Gr. Total 6.

29 ²*hf*. Dr. H. DE W. FULLER. — Netherlandish Literature and its relations to European Literature in other Tongues. 1 Gr., 1 So. Total 2.

COURSES OF SPECIAL STUDY.

20. Professor SCHOFIELD. — Opportunities were afforded to competent Graduate Students, under the guidance of instructors, for original investigation in special topics.

20*e*. Professor F. N. ROBINSON. — The Relations of Irish and Welsh Literatures to European Literature in other Tongues. 1 Gr. Total 1.

20*g*. Professor GRANDGENT. — The Relations of Provençal Literature to European Literature in other Tongues. 1 Gr. Total 1.

20*h*. Asst. Professor FORD. — The Relations of Spanish Literature to European Literature in other Tongues. 1 Gr. Total 1.

## History and Political Science.

### HISTORY.

*Primarily for Undergraduates:* —

1*a*. Professor HASKINS, assisted by Messrs. OGG, GRAY, READ, and MORRIS. — Mediaeval History (introductory course). 1 Ju., 37 So., 230 Fr., 33 Sp., 2 Sc. Total 303.

27. Dr. MERRIMAN. — History of Western Europe from the close of the Middle Ages to 1715. 3 Se., 2 Ju., 51 So., 5 Fr., 2 Sp. Total 63.

*For Undergraduates and Graduates:* —

8. Professor HASKINS. — History of Rome to the reign of Diocletian. 4 Gr., 7 Se., 8 Ju., 5 So., 1 Fr. Total 25.

8. Professor GROSS. — History of France to the reign of Francis I. 4 Gr., 2 Se., 3 Ju., 6 So. Total 15.

29. Dr. MERRIMAN. — History of Spain. 7 Gr., 2 Se., 2 Ju , 3 So., 1 Sp. Total 15.

9. Professor GROSS. — Constitutional History of England to the Sixteenth Century. 16 Gr., 11 Se., 23 Ju., 8 So., 1 Sp. Total 59.

12*a* ¹*hf*. Professor MACVANE, assisted by Mr. THOMPSON. — English History from the Revolution of 1688 to the Reform of Parliament. 11 Gr., 33 Se., 38 Ju., 34 So., 5 Fr., 5 Sp. Total 126.

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12*b* ²*hf*. Professor MACVANE, assisted by Mr. THOMPSON. — English History since the Reform of Parliament.
11 Gr., 25 Se., 40 Ju., 31 So., 4 Fr., 3 Sp., 1 Di. Total 115.

16*a* ¹*hf*. Professor MACVANE, assisted by Dr. ANDREWS. — History of Continental Europe from the Peace of Utrecht to the Fall of Napoleon I.
3 Gr., 16 Se., 43 Ju., 60 So., 5 Fr., 4 Sp., 1 Med. Total 132.

16*b* ²*hf*. Professor MACVANE, assisted by Dr. ANDREWS. — History of Continental Europe since the Fall of Napoleon I.
3 Gr., 11 Se., 36 Ju., 52 So., 6 Fr., 5 Sp. Total 113.

28. Mr. R. M. JOHNSTON. — History of the Rise of Prussia from the Great Elector to the present day. 3 Gr., 4 Se., 5 Ju., 3 So. Total 15.

32 ¹*hf*. Mr. R. M. JOHNSTON. — European and American Warfare of the Nineteenth Century. 10 Se., 8 Ju., 4 So. Total 22.

10. Professor CHANNING, assisted by Dr. R. G. USHER. — American History to 1783. 1 Gr., 5 Se., 13 Ju., 31 So., 2 Fr., 3 Sp. Total 55.

13. Professor A. B. HART, assisted by Messrs. BISHOP and PLAISTED. — Constitutional and Political History of the United States (1783–1865).
4 Gr., 10 Se., 56 Ju., 28 So., 1 Fr., 5 Sp. Total 104.

*Primarily for Graduates:* —

‡21. Professor HASKINS. — Introduction to the Sources of Mediæval History.
6 Gr., 1 Se., 1 Ju. Total 8.

34 ¹*hf*. Professor PLATNER (Andover Theological Seminary). — Christian Institutions, historically and comparatively considered. 7 Di. Total 7.

24 ¹*hf*. Professor E. C. MOORE. — The Church since the Reformation.
15 Se., 9 Ju., 15 So., 2 Sp., 4 Di. Total 45.

23*a* ¹*hf*. Professor CHANNING. — Selected Topics in the historical development of American Institutions. English Colonial Administration and Administrators, 1689–1760. 10 Gr. Total 10.

23*b* ²*hf*. Professor CHANNING. — Selected Topics in the historical development of American Institutions. American History, 1689–1760. 9 Gr. Total 9.

COURSES OF RESEARCH.

20*b*. Professor GROSS. — English Institutions in the Middle Ages.
5 Gr. Total 5.

20*c*. Professor HASKINS. — Institutions of Continental Europe in the Middle Ages. 1 Gr. Total 1.

20*e*. Professor CHANNING. — American History. 2 Gr., 1 Ju. Total 3.

20*f*. Dr. MERRIMAN. — English Institutions in the Tudor and Stuart Periods.
1 Gr. Total 1.

20*h*. Mr. R. M. JOHNSTON. — History of France and Italy during the period of Napoleon and the Risorgimento. 1 So. Total 1.

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GOVERNMENT.

*Primarily for Undergraduates:* —

1. Professor LOWELL and Asst. Professor MUNRO, assisted by Messrs. LUNT, CATLETT, RICE, NEAGLE, and KELLEY. — Constitutional Government (elementary course). 3 Ju., 104 So., 241 Fr., 33 Sp., 2 Sc. Total 383.

*For Undergraduates and Graduates:* —

4 ²*hf*. Professor G. G. WILSON (Brown University). — Elements of International Law. 4 Gr., 13 Se., 12 Ju., 11 So., 1 Fr., 1 Sp. Total 42.

6 ²*hf*. Asst. Professor MUNRO. — History of Political Theories. 1 Gr., 2 Se., 2 Ju., 6 So., 1 Sp. Total 12.

13 ²*hf*. Mr. R. M. JOHNSTON. — European Diplomacy since 1814. 4 Gr., 3 Ju., 2 So. Total 9.

17. Asst. Professor MUNRO, assisted by Mr. NEAGLE. — Modern Municipal Government. 4 Gr., 17 Se., 28 Ju., 29 So., 2 Sp. Total 80.

21. Mr. E. M. PARKER. — Comparative Administration and Administrative Law. 4 Gr., 4 Ju., 1 Sp. Total 9.

*Primarily for Graduates:* —

10 ²*hf*. Professor LOWELL. — Modern English Government. A study of the existing system of national government, and of the working of political parties. 4 Gr., 2 Se., 1 Ju., 5 So. Total 12.

‡12. Professor A. B. HART. — The American Political System, national, state, and municipal. 14 Gr., 4 Se., 4 Ju., 1 So., 2 Sp., 5 R. Total 30.

19. Professor STIMSON. — American Constitutional Law. A study of constitutional principles and limitations throughout the United States. 11 Gr., 16 Se., 12 Ju., 6 So., 2 Sp. Total 47.

COURSES OF RESEARCH.

20*e*. Professor A. B. HART and Asst. Professor MUNRO. — American Institutions. 8 Gr., 1 Ju. Total 9.

20*f*. Professor STIMSON. — Constitutional Protection to Private Rights. 1 Gr., 1 Ju., 1 So. Total 3.

**Economics.**

*Primarily for Undergraduates:* —

1. Professor TAUSSIG and Asst. Professors BULLOCK and ANDREW, assisted by Messrs. MARTIN, MASON, G. R. LEWIS, HUSE, and HOLCOMBE. — Principles of Economics. 1 Gr., 15 Se., 43 Ju., 252 So., 50 Fr., 26 Sp., 3 Sc., 2 Bu. Total 392.

*For Undergraduates and Graduates:* —

2. Professor TAUSSIG. — Principles of Economics (second course). 12 Gr., 6 Se., 9 Ju., 2 So., 2 Sp., 2 Di. Total 33.

3. Mr. J. A. FIELD. — Principles of Sociology. Theories of Social Progress. 4 Gr., 9 Se., 16 Ju., 11 So., 3 Sp., 1 Di. Total 44.

4. Professor RIPLEY. — Statistics. Theory, method, and practice. 5 Gr., 3 Se., 2 Ju., 3 So. Total 13.

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5 ¹*hf*. Professor RIPLEY, assisted by Dr. DAGGETT and Mr. W. W. MCLAREN. — Economics of Transportation.
7 Gr., 59 Se., 100 Ju., 31 So., 2 Fr., 4 Sp., 2 Sc. Total 205

6*a* ¹*hf*. Professor GAY. — European Industry and Commerce in the Nineteenth Century. 17 Gr., 20 Se., 21 Ju., 12 So., 2 Sp., 1 Sc. Total 73.

6*b* ²*hf*. Professor GAY. — Economic and Financial History of the United States.
20 Gr., 13 Se., 44 Ju., 25 So., 2 Fr., 5 Sp., 1 Sc., 2 Di. Total 112.

8*a* ¹*hf*. Asst. Professor ANDREW. — Money. A general survey of currency legislation, experience, and theory in recent times.
4 Gr., 12 Se., 22 Ju., 10 So., 1 Sp., 1 Law. Total 50.

8*b* ²*hf*. Asst. Professor ANDREW. — Banking and Foreign Exchange.
3 Gr., 10 Se., 32 Ju., 30 So., 2 Fr., 5 Sp. Total 82.

9*a* ¹*hf*. Professor RIPLEY, assisted by Mr. E. DET. BECHTEL. — Problems of Labor. 8 Gr., 35 Se., 33 Ju., 18 So., 4 Sp., 2 Di. Total 100.

9*b* ²*hf*. Professor RIPLEY, assisted by Dr. DAGGETT. — Economics of Corporations.
10 Gr., 1 G. S., 70 Se., 103 Ju., 40 So., 1 Fr., 8 Sp., 1 Sc., 2 Di. Total 236.

11. Professor GAY. — Modern Economic History of Europe.
8 Gr., 4 Se., 4 Ju., 6 So., 2 Sp., 1 Di. Total 25.

12 ¹*hf*. Asst. Professor ANDREW. — Commercial Crises and Cycles of Trade.
4 Gr., 11 Se., 9 Ju., 2 So. Total 26.

14*a* ¹*hf*. Professor FETTER (Cornell University). — The Distribution of Wealth.
5 Gr., 12 Se., 9 Ju., 4 So., 1 Sp., 1 Di., 1 Law. Total 33.

14*b* ¹*hf*. Professor FETTER (Cornell University). — Methods of Social Reform. Socialism, Communism, the Single Tax, etc.
4 Gr., 8 Se., 10 Ju., 3 So., 6 Di., 1 Law. Total 32.

16*a* ¹*hf*. Asst. Professor BULLOCK. — Introduction to Public Finance.
4 Se., 7 Ju., 3 So., 1 Sp. Total 15.

16*b* ²*hf*. Asst. Professor BULLOCK. — The Theory and Methods of Taxation.
3 Gr., 4 Se., 9 Ju., 5 So., 1 Sp. Total 22.

17 ²*hf*. Dr. DAGGETT. — Railroad Practice.
4 Gr., 14 Se., 12 Ju., 5 So., 2 Sp. Total 37.

18. Mr. W. M. COLE. — Principles of Accounting.
7 Gr., 50 Se., 21 Ju., 8 So., 3 Sp., 1 Law. Total 90.

21. Asst. Professor WYMAN. — Principles of Law governing Industrial Relations and Commercial Law.
6 Gr., 83 Se., 43 Ju., 14 So., 5 Sp., 1 Sc. Total 152.

*Primarily for Graduates:* —

‡15. Asst. Professor BULLOCK. — History and Literature of Economics to the year 1848. 7 Gr., 1 Ju. Total 8.

‡22. Professor GAY. — German and French Economists of the Nineteenth Century. 3 Gr. Total 3.

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COURSES OF RESEARCH.

20*a*. Professor GAY. — Selected Topics in English Economic History.
4 Gr Total 4.

‡20*d*. Professor TAUSSIG. — Selected Topics in the Tariff History of the United States. 3 Gr., 1 So. Total 4.

THE SEMINARY IN ECONOMICS.

20. Competent students were guided in investigation, undertaken independently or in connection with courses primarily for graduates; and the results were presented for discussion. 4 Gr. Total 4.

## History of Religions.

*For Undergraduates and Graduates:* —

1 $^{1}hf$. Professor G. F. MOORE. — Introduction to the Study of Religions.
3 Gr., 4 Se., 3 Ju., 1 So., 1 Sp., 1 Sc., 9 Di. Total 22.

2. Professor G. F. MOORE. — History of Religions in Outline. The Religions of China and Japan, Egypt, Babylonia and Assyria, and the Western Semites (including Judaism and Mohammedanism). The Religions of India, Persia, the Greeks, Romans, Germans, and Celts; Christianity.
3 Gr., 12 Se., 10 Ju., 11 So., 3 Sp., 7 Di., 1 Me. Total 47.

## Philosophy.

*Primarily for Undergraduates:* —

*A* $^{1}hf$. Professor PALMER. — History of Ancient Philosophy.
2 Gr., 6 Se., 27 Ju., 53 So., 30 Fr., 4 Sp., 2 Sc. Total 124.

*B* $^{2}hf$. Professor PALMER. — History of Modern Philosophy.
1 Gr., 9 Se., 25 Ju., 77 So., 45 Fr., 11 Sp., 2 Sc. Total 170.

*C* $^{1}hf$. Professor ROYCE. — Logic.
2 Se., 18 Ju., 34 So., 19 Fr., 6 Sp., 1 Sc. Total 80.

*D* $^{1}hf$. Professor JAMES. — General Problems of Philosophy.
1 Gr., 4 Se., 47 Ju., 49 So., 17 Fr., 13 Sp., 1 Di., 1 Law. Total 133.

*E* $^{2}hf$. Professor MÜNSTERBERG. — Psychology.
1 Gr., 7 Se., 41 Ju., 91 So., 60 Fr., 13 Sp., 1 Sc., 1 Di., 1 Law. Total 216.

*For Undergraduates and Graduates:* —

2 $^{1}hf$. Asst. Professor HOLT. — Advanced Psychology.
2 Gr., 3 Se., 1 Ju., 1 So. Total 7.

13*a* $^{1}hf$. Dr. YERKES. — Comparative Psychology. Mental Development in the Race. 2 Gr., 5 Se., 2 Ju., 7 So. Total 16.

13*b* $^{2}hf$. Dr. YERKES. — Comparative Psychology. Mental Development in the Individual. 3 Gr., 2 Se., 3 Ju., 6 So., 1 Di. Total 15.

14 $^{2}hf$. Asst. Professor HOLT. — Experimental Psychology (elementary laboratory course). 2 Gr., 1 Se., 1 Sp. Total 4.

3. Asst. Professor R. B. PERRY. — Philosophy of Nature, with special reference to Man's Place in Nature Fundamental Conceptions of Natural Science, and their relation to Ethical and Religious Truth.
2 Gr., 1 Se., 1 So., 2 Di. Total 6.

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4. Asst. Professor R. B. PERRY. — Ethics. The Theory of Morals, considered constructively. 5 Gr., 3 Se., 1 Ju., 1 So., 4 Di. Total 14.

9. Professor ROYCE. — Metaphysics. The Fundamental Problems of Theoretical Philosophy. The Nature of Reality; Monism and Pluralism; Freedom, Teleology, and Theism. 5 Gr., 3 Se., 1 Ju., 3 So., 5 Di. Total 17.

15. Professor ROYCE. — Theory of Knowledge. The Processes of Conception, Judgment, and Reasoning. The Relations of Thought and Reality. The Elements of Symbolic Logic. 2 Gr., 1 Se. Total 3.

18. Dr. WOODS. — Philosophical Systems of India, with special reference to Vedanta, Sankhya, and Yoga. 1 Gr., 2 Ju., 2 Di. Total 5.

12. Asst. Professor SANTAYANA. — Greek Philosophy, with special reference to Plato. 2 Gr., 13 Se., 6 Ju., 7 So., 1 Di. Total 29.

11*a* ¹*hf*. Dr. WOODS. — Descartes, Spinoza, and Leibnitz.
2 Gr., 4 Se., 2 Ju., 2 So. Total 10.

11*b* ¹*hf*. Dr. WOODS. — English Philosophy from Locke to Hume.
3 Gr., 3 Se., 1 Ju., 3 So., 2 Sp., 1 Di. Total 13.

8 ¹*hf*. Professor PALMER. — The Kantian Philosophy.
4 Gr., 5 Se., 3 So., 1 Di. Total 13.

10. Asst. Professor SANTAYANA. — Philosophy of History.
4 Gr., 10 Se., 5 Ju., 5 So., 1 Sp., 1 Law, 1 Di. Total 27.

16 ¹*hf*. Professor FENN. — Theism. 1 Gr., 1 Ju., 9 Di. Total 11.

17 ¹*hf*. Professor E. C. MOORE. — History of Christian Thought since Kant.
2 Gr., 2 Se., 1 So., 1 Sp., 8 Di. Total 14.

COURSES OF SPECIAL STUDY.

*Primarily for Graduates:* —

‡20*a*. Professor MÜNSTERBERG, Asst. Professor HOLT, and Dr. YERKES. — Psychological Laboratory. Experimental investigations.
10 Gr., 1 Se., 2 R. Total 13.

20*b*. Professor MÜNSTERBERG. — Psychological Seminary. Mind and Body.
12 Gr., 2 Se., 2 Di. Total 16.

‡20*c*. Professor ROYCE. — Logical Seminary. Hegel's Phenomenology.
7 Gr., 2 Di. Total 9.

‡20*d*. Professor PALMER. — Ethical Seminary. The Systematization of Ethics.
6 Gr., 1 Se., 2 R. Total 9.

20*e*. Asst. Professor SANTAYANA. — Historical Seminary. History of Philosophy in the Middle Ages. 3 Gr., 1 Se. Total 4.

20*f*. Professor ROYCE. — Seminary on the Aims and Methods of the Teaching and Study of Philosophy. 3 Gr. Total 3.

## Social Ethics.

*For Undergraduates and Graduates:* —

1. Professor PEABODY and Dr. ROGERS. — Social Ethics. The problems of Poor-Relief, the Family, Temperance, and various phases of the Labor Question, in the light of ethical theory.
6 Gr., 41 Se., 54 Ju., 50 So., 1 Fr., 11 Sp., 12 Di. Total 175.

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2$\frac{3}{m}$ *hf.* Dr. BRACKETT. — Social Ethics. Practical Problems of Public Aid, Charity, and Neighborhood Work.
2 Gr., 3 Se., 4 Ju., 5 So., 9 Di. Total 23.

3 *1hf.* Dr. ROGERS. — Criminology and Penology.
31 Se., 16 Ju., 17 So., 5 Sp. Total 69.

*Primarily for Graduates: —*

COURSES OF RESEARCH.

‡20*a*. Professor PEABODY. — Seminary of Social Ethics. Christian Ethics and Modern Life. 3 Gr., 17 Di., 1 R. Total 21.

‡20*b*. Professor PEABODY directed special research in the Ethics of the Social Questions. 1 Gr., 1 Se., 2 Di., 1 R. Total 5.

20*c*. Dr. BRACKETT. — The School for Social Workers.
2 Gr., 1 So., 3 Sp., 1 Di. Total 7.

## Education.

*For Undergraduates and Graduates: —*

1. Asst. Professor A. O. NORTON. — History of Educational Practices and Theories. 11 Gr., 5 Se., 3 Ju., 3 So., 6 Sp., 5 Sc. Total 33.

2*a* *1hf.* Professor HANUS. — Introduction to the Study of Education. Discussion of Educational Principles.
10 Gr., 11 Se., 3 Ju., 4 So., 5 Sp., 3 Sc., 1 Bu. Total 37.

2*b* *3hf.* Professor HANUS. — School Administration as a Branch of Municipal Affairs, more particularly in Massachusetts. Contemporary Tendencies and Problems. 3 Se., 4 So., 3 Sp., 1 Sc. Total 11.

5 *1hf.* Asst. Professor A. O. NORTON. — Education of the Individual. Critical and historical study of modern views. 9 Gr., 1 Ju., 2 Sp., 5 Sc. Total 17

*Primarily for Graduates: —*

‡8. Professor HANUS and Asst. Professor A. O. NORTON. — Organization and Management of Public Schools and Academies. Supervision, Courses of Study, and Teaching.
16 Gr., 5 Se., 1 Ju., 2 Sp., 1 Sc., 1 Bu., 6 R. Total 32.

‡10*a* *2hf.* Associate Professor C. P. PARKER. — Methods and Equipment of a teacher of Classics in secondary schools. 1 Gr., 1 Sp. Total 2.

SEMINARY COURSES.

‡20*a*. Professor HANUS. — Seminary. Contemporary Problems in Education.
19 Gr. Total 19.

‡20*b*. Asst. Professor A. O. NORTON. — Seminary in the History of Education.
5 Gr. Total 5.

## The Fine Arts.

*Primarily for Undergraduates: —*

1. Professor CHARLES H. MOORE, assisted by Messrs. MOWER and POPE. — Principles of Delineation, Color, and Chiaroscuro, with some consideration of historic forms of Art, and the conditions which have influenced them.
1 G. S., 7 Ju., 31 So., 42 Fr., 5 Sp. Total 86.

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*For Undergraduates and Graduates:* —

1. Professor CHARLES H. MOORE. — Principles of Design in Architecture, Sculpture, and Painting, as exemplified in the Arts of past ages.
3 Se., 3 Ju., 2 So., 1 Fr., 4 Sp. Total 13.

3. Asst. Professor CHASE, assisted by Mr. DINSMOOR. — History of Ancient Art. Architecture, Sculpture, and Painting in Egypt, Assyria, and Greece, with some account of the lesser arts.
1 Gr., 13 Se., 24 Ju., 55 So., 10 Fr., 3 Sp., 1 Sc. Total 107.

4. Professor CHARLES H. MOORE, assisted by Mr. FITZPATRICK. — The Fine Arts of the Middle Ages and the Renaissance.
1 Gr., 16 Se., 34 Ju., 9 So., 1 Sp., 1 Sc. Total 62.

5. Mr. POPE. — Landscape Painting: its history and principles, with special reference to the works of Turner.
1 G.S., 3 Se., 3 Ju., 6 So., 2 Sp., 1 Sc. Total 16.

## Architecture.

*Of the courses in Architecture, only Courses 1a, 1b, 1c, 2a, 2b, 3a, 3b, 4a, 7a, 7b may be counted towards the degree of A.B.*

*For Undergraduates and Graduates:* —

1a. Professor H. L. WARREN, assisted by Messrs. SWAN and SKENE. — Technical and Historical Development of the Ancient Styles, with special reference to Classic Architecture.
1 G.S., 2 Se., 3 Ju., 6 So., 6 Fr., 4 Sp. Total 22.

1b. Professor H. L. WARREN, assisted by Mr. SKENE. — Technical and Historical Development of the Mediaeval Styles of Architecture.
3 G.S., 3 Se., 10 Ju., 5 So., 7 Sp., 7 Sc. Total 35.

2a. Mr. SWAN and Mr. JENNEY, assisted by Mr. SKENE. — Elementary Architectural Drawing. Elements of Architectural Form. The Orders.
2 G.S., 2 Se., 5 Ju., 2 So., 4 Fr., 4 Sp. Total 19.

2b. Asst. Professor MOWLL. — Stereotomy, Shades and Shadows, and Perspective. 1 Gr., 6 G.S., 1 Ju., 2 So., 3 Sp., 2 Sc. Total 15.

3a. Asst. Professor MOWLL and Mr. SWAN. — Freehand Drawing.
2 G.S., 4 Se., 7 Ju., 8 So., 9 Sp., 8 Sc. Total 38.

3b. Mr. H. B. WARREN, assisted by Mr. SKENE. — Freehand Drawing (second course). Mr. MURPHY. — Drawing from the Life.
1 Gr., 4 G.S., 1 Se., 2 Ju., 1 So., 3 Sp., 4 Sc. Total 16.

3c. Mr. H. B. WARREN. — Freehand Drawing (third course). Mr. MURPHY. — Drawing from the Life. 4 G.S., 4 Sc. Total 8.

4a. Asst. Professor MOWLL and Mr. SWAN; with lectures on the Principles of Design in Architecture, and occasional criticism, by Professor H. L. WARREN. — Elementary Architectural Design.
2 G.S., 3 Se., 2 Ju., 2 So., 5 Sp., 4 Sc. Total 18.

4b. Professor H. L. WARREN and Asst. Professor MOWLL. — Architectural Design (second course). 1 Gr., 3 G.S., 1 Se., 1 So., 3 Sp., 2 Sc. Total 11.

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5 ²*hf*. Mr. JENNEY. — Elements of Construction; Materials and Methods.
3 G. S., 1 Se., 4 Ju., 2 So., 3 Sp., 4 Sc. Total 17.

6 *hf*. Mr. GARBUTT. — Modelling. 3 G. S., 1 Sp., 6 Sc. Total 10.

7*a* ¹*hf*. Dr. Ross and Mr. E. O. PARKER. — Theory of Pure Design, Harmony, Rhythm, and Balance.
1 Gr., 5 Se., 6 Ju., 3 So., 1 Fr., 3 Sp., 2 Sc. Total 21.

*Primarily for Graduates:* —

3*d*. Messrs. H. B. WARREN and MURPHY. — Freehand Drawing (fourth course).
1 Gr., 3 Sc. Total 4.

4*c*. Professor H. L. WARREN and Asst. Professor MOWLL, with the coöperation, successively, of Messrs. WHEELWRIGHT, C. A. COOLIDGE, STURGIS, and DAY. — Architectural Design (third course).
3 G. S., 1 Se., 7 Sc. Total 11.

4*d*. Professor H. L. WARREN and Asst. Professor MOWLL, and, successively, Messrs. WHEELWRIGHT, C. A. COOLIDGE, STURGIS, and DAY. — Architectural Design (advanced course). 1 Gr. Total 1.

7*b* ¹*hf*. Dr. ROSS. — Theory of Tone-Relations: Values, Colors, and Intensities of Color. Applications of the Theory in Pure Design and in Representation. 4 Se., 2 Ju., 2 Fr., 1 Sp. Total 9.

COURSES OF SPECIAL STUDY.

20*a*. Professor H. L. WARREN. — Competent students who satisfied the instructor of their fitness to pursue advanced work were directed in the study of special periods in the history of architecture.
2 G. S., 1 Se., 4 Sc. Total 7.

20*b* ¹*hf*. Dr. ROSS. — Advanced Practice in Pure Design or in Representation.
1 G. S., 1 Se., 1 Sp. Total 3.

## Landscape Architecture.

*For Undergraduates and Graduates:* —

1. Asst. Professor PRAY, with occasional lectures by Professor OLMSTED. — Principles of Landscape Architecture.
1 G. S., 9 Se., 18 Ju., 26 So., 6 Sp., 3 Sc. Total 63.

2. Asst. Professor PRAY and Mr. HUBBARD. — Practice in Design (first course).
1 G. S., 1 Se., 1 Sp., 4 Sc. Total 7.

3. Professor OLMSTED and Asst. Professor PRAY. — Practice in Design (second course). 1 G. S., 2 Sc. Total 3.

4. Mr. HUBBARD. — Details of Construction.
2 G. S., 2 Se., 1 So., 2 Sp., 3 Sc. Total 10.

## Music.

*For Undergraduates and Graduates:* —

1. Asst. Professor SPALDING and Messrs. HEILMAN and HURLIN. — Harmony.
2 Se., 7 Ju., 5 So., 18 Fr., 1 Sp. Total 33.

2. Mr. HEILMAN. — Counterpoint. 1 Gr., 3 Se., 1 Ju., 4 So., 2 Fr. Total 11.

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*2a hf.* Asst. Professor SPALDING. — Vocal Counterpoint, with analysis of choral works of the great composers. 2 Se., 3 Ju., 1 So., 1 Sp. Total 7.

3. Asst. Professor SPALDING. — History of Music from the time of Palestrina to the present day.
8 Se., 14 Ju., 28 So., 16 Fr., 2 Sp., 1 Sc., 1 Di. Total 70.

4. Asst. Professor SPALDING and Mr. HEILMAN. — Musical Form, with analysis of the works of the great composers.
1 Gr., 4 Se., 4 Ju., 4 So., 1 Fr., 1 Sp. Total 15.

5. Asst. Professor SPALDING. — Canon and Fugue.
2 Gr., 3 Ju., 4 So., 2 Fr., 2 Sp., 1 R. Total 14.

*Primarily for Graduates: —*

‡6. Asst. Professor SPALDING. — Instrumentation.
2 Gr., 5 Se., 5 So., 1 Sp., 4 R. Total 17.

‡7. Asst. Professor CONVERSE. — Free Composition.
5 Se., 1 So., 2 Sp., 1 R. Total 9.

## Mathematics.

*Primarily for Undergraduates: —*

*F.* Asst. Professor BOUTON and Dr. COOLIDGE. — Trigonometry and Plane Analytic Geometry.
1 G. S., 4 Se., 8 Ju., 10 So., 46 Fr., 5 Sp. Total 74.

*A* $^{1}$*hf.* Mr. EVANS. — Logarithms; Plane and Spherical Trigonometry.
1 Ju., 7 So., 15 Fr., 2 Sp. Total 25.

*C.* Professor BÔCHER. — Plane and Solid Analytic Geometry (extended course).
2 Ju., 3 So., 32 Fr., 1 Sp., 2 Sc. Total 40.

*D* $^{2}$*hf.* Asst. Professor WHITTEMORE. — Algebra.
1 Ju., 9 So., 30 Fr., 2 Sp. Total 42.

*E* $^{1}$*hf.* Asst. Professors BOUTON and WHITTEMORE, and Dr. COOLIDGE. — Solid Geometry. 2 Se., 3 Ju., 17 So., 39 Fr., 12 Sp., 11 Sc. Total 84.

*G* $^{2}$*hf.* Asst. Professor BOUTON. — Descriptive Geometry.
1 Gr., 2 Se., 2 Ju., 4 So., 4 Fr., 1 Sc. Total 14.

2. Professor BYERLY. — Differential and Integral Calculus (first course).
2 Gr., 8 Se., 21 Ju., 30 So., 2 Fr., 2 Sp., 3 Sc. Total 68.

4. Professor OSGOOD. — The Elements of Mechanics.
6 Gr., 3 Se., 11 Ju., 2 So., 1 Sp., 3 Sc. Total 26.

*For Undergraduates and Graduates: —*

3. Dr. COOLIDGE. — Introduction to Modern Geometry and Modern Algebra.
7 Gr., 2 Ju., 6 So. Total 15.

5. Professor OSGOOD. — Differential and Integral Calculus (second course).
8 Gr., 2 Se., 6 Ju., 1 Sp., 1 Sc. Total 18.

12 $^{1}$*hf.* Professor OSGOOD. — Infinite Series and Products.
7 Gr. Total 7.

14*b* $^{2}$*hf.* Professor OSGOOD. — Algebra. Galois's Theory of Equations.
4 Gr., 1 Sc. Total 5.

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24 ²*hf*. Professor Bôcher. — The Theory of Numbers.
3 Gr., 1 Se., 4 Ju. Total 8.

8. Professor Byerly. — Dynamics of a Rigid Body. 4 Gr., 2 Se. Total 6.

*Primarily for Graduates:* —

‡13. Asst. Professor Whittemore. — The Theory of Functions (introductory course). 6 Gr., 1 Se. Total 7.

‡22 ¹*hf*. Asst. Professor Whittemore. — Introduction to the Differential Geometry of Curves and Surfaces. 5 Gr., 1 R. Total 6.

‡26. Dr. Coolidge. — Line Geometry. 1 Gr., 1 Se., 1 R. Total 3.

‡21 ¹*hf*. Professor Bôcher. — Methods of Interpolation and Approximation.
4 Gr., 2 Ju., 1 R. Total 7.

‡10. Professors Byerly and B. O. Peirce. — Trigonometric Series. Introduction to Spherical Harmonics. The Potential Function.
5 Gr., 1 Se., 1 R. Total 7.

‡15. Asst. Professor Bouton. — Differential Equations, with an introduction to Lie's Theory of Continuous Groups. 5 Gr. Total 5.

‡30. Professor Bôcher. — The Linear Differential Equations of Physics.
5 Gr., 1 Se. Total 6.

Reading Course.

‡20*c*. Dr. Coolidge. — Enriques' Projective Geometry. 1 Gr. Total 1.

Courses of Research.

‡20*d*. Professor Osgood. — Topics in the Theory of Functions. 1 Gr. Total 1.

‡20*e*. Professor Bôcher. — Fluctuating Functions. 2 Gr. Total 2.

## Astronomy.

*Primarily for Undergraduates:* —

1 ¹*hf*. Professor Willson, assisted by Messrs. Brenke, Gould, Watson, E. F. Adams, and Harbour. — Descriptive Astronomy.
11 Se., 13 Ju., 23 So., 5 Fr., 3 Sp., 4 Sc. Total 59.

2 ²*hf*. Professor Willson. — Practical Astronomy. Application of Astronomy to Navigation and Exploration. 2 Se., 4 Ju., 7 So. Total 13.

*For Undergraduates and Graduates:* —

8. Professor Willson. — Practical Astronomy. Portable and fixed instruments. 3 Gr., 1 Se., 2 Ju. Total 6.

*Primarily for Graduates:* —

5. Professor Willson. — Practical Astronomy. Instruments of the fixed observatory. 2 Gr. Total 2.

## Physics.

*Primarily for Undergraduates:* —

*B*. Professor Hall, Dr. G. W. Pierce, and Mr. J. M. Adams. — Elementary Course. 1 Gr., 1 Se., 2 Ju., 18 So., 35 Fr., 22 Sp., 3 Sc. Total 82.

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*C.* Professor SABINE, Drs. PIERCE, LYMAN, and H. W. MORSE, and Mr. L. D. HILL. — Experimental Physics. Mechanics, Sound, Light, Magnetism, and Electricity.
3 Gr., 1 G. S., 5 Se., 22 Ju., 35 So., 52 Fr., 30 Sp., 42 Sc. Total 190.

1. Professor HALL and Mr. SERVISS. — General Descriptive Physics.
2 Se., 2 Ju., 5 So., 5 Fr., 2 Sp., 2 Sc. Total 18.

11 $^{1}hf$. Dr. H. W. MORSE. — The Theory of Primary and Secondary Batteries.
3 Se., 4 So., 2 Sc. Total 9.

*For Undergraduates and Graduates: —*

2. Professor SABINE. — Light. 2 Gr., 3 Se., 1 So., 1 Sc. Total 7.

3. Professor B. O. PEIRCE and Dr. H. N. DAVIS. — Electrostatics, Electrokinematics, and parts of Electromagnetism.
1 G. S., 2 Se., 12 Ju., 4 So., 12 Sc. Total 31.

12 $^{1}hf$. Dr. LYMAN. — Radioactivity and Electric Conduction in Gases with special reference to the Theory of Ions.
3 Gr., 2 Se., 5 Ju., 4 So., 3 Sc. Total 17.

17 $^{2}hf$. Dr. G. W. PIERCE. — Electric Waves and their Application to Wireless Telegraphy. 3 Gr., 2 Se., 10 Ju., 3 Sc. Total 18.

4. Professor TROWBRIDGE, Dr. G. W. PIERCE, and Dr. LYMAN. — Magnetism, Electromagnetism, and Electrodynamics.
1 Gr., 1 G. S., 3 Se., 1 Sp., 12 Sc. Total 18.

6*a* $^{1}hf$. Professor HALL. — Elements of Thermodynamics.
5 Se., 3 Ju., 2 Sc. Total 10.

6*b* $^{2}hf$. Professor HALL. — Modern Developments and Applications of Thermodynamics. 3 Se., 1 Ju., 1 Sc. Total 5.

14 $^{2}hf$. Dr. H. W. MORSE. — The Theory of Photography.
1 Gr., 3 Se., 2 Ju., 3 Sc. Total 9.

15 $^{1}hf$. Dr. G. W. PIERCE. — Radiation. 1 Gr., 3 Se., 2 Ju., 1 Sc. Total 7.

*Primarily for Graduates: —*

‡7 *hf*. Professor HALL. — The Theory of Probability and the Kinetic Theory of Gases. 2 Se. Total 2.

‡9. Professor B. O. PEIRCE. — The Mathematical Theory of Electricity and Magnetism. 3 Gr., 1 Se. Total 4.

COURSES OF RESEARCH.

20*b*. Professor B. O. PEIRCE. — Electricity and Magnetism. 1 Gr. Total 1.

20*c*. Professor HALL. — Heat and Electricity. 1 Gr. Total 1.

20*d*. Professor SABINE. — Light and Heat. 3 Gr. Total 3.

20*e*. Dr. G. W. PIERCE. — Radiation and Electromagnetic Waves.
1 Gr., 1 Se. Total 2.

20*g*. Dr. LYMAN. — Light of Short Wave Lengths. 1 Gr. Total 1.

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## Chemistry.

*Primarily for Undergraduates:* —

1. Professor C. L. JACKSON, Dr. L. CLARKE, Mr. CARLETON, and seven assistants. — Descriptive Inorganic Chemistry.
2 Gr., 5 Se., 18 Ju., 54 So., 135 Fr., 59 Sp., 25 Sc. Total 298.

2 ¹*hf*. Asst. Professor TORREY and Mr. ZANETTI. — Organic Chemistry (elementary course).
2 Gr., 13 Se., 30 Ju., 33 So., 6 Fr., 7 Sp., 8 Sc., 1 Bu. Total 100.

3. Professor SANGER, Mr. CHAPIN, and four assistants. — Qualitative Analysis.
6 Gr., 8 Se., 25 Ju., 40 So., 17 Sp., 13 Sc. Total 109.

*For Undergraduates and Graduates:* —

4. Asst. Professor BAXTER and Mr. BOYLSTON. — Quantitative Analysis, gravimetric and volumetric.
7 Gr., 5 Se., 8 Ju., 9 So., 6 Sp., 4 Sc. Total 39.

8 ²*hf*. Asst. Professors TORREY and BAXTER. — The Historical Development of Chemical Theory. Elementary Physical Chemistry.
3 Gr., 6 Se., 17 Ju., 22 So., 3 Fr., 3 Sp., 7 Sc. Total 61.

11. Professor WALKER (Mass. Institute of Technology). — Industrial Chemistry.
5 Gr., 5 Se., 6 Ju., 1 So., 7 Sc. Total 24.

9 ¹*hf*. Asst. Professor BAXTER and Mr. GRINNELL JONES. — Advanced Quantitative Analysis. 5 Gr., 3 Se., 3 Ju., 2 So., 3 Sc. Total 16.

10 ²*hf*. Asst. Professor BAXTER and Mr. GRINNELL JONES. — Gas Analysis.
6 Gr., 3 Se., 5 Ju., 3 So., 1 Sp., 1 Sc. Total 19.

5. Asst. Professor TORREY and Mr. KIPPER. — The Carbon Compounds.
9 Gr., 5 Se., 8 Ju., 5 So., 3 Sp., 4 Sc. Total 34.

5*a hf*. Asst. Professor TORREY and Mr. KIPPER. — The Carbon Compounds.
8 Gr., 6 Se., 7 Ju., 4 So., 3 Sp., 4 Sc. Total 32.

15 ²*hf*. Dr. HENDERSON. — General Biological Chemistry.
6 Gr., 11 Se., 13 Ju., 8 So., 2 Sp., 4 Sc. Total 44.

*Primarily for Graduates:* —

6. Professor RICHARDS and Mr. FREVERT. — Physical Chemistry.
6 Gr., 3 Se., 4 Ju., 2 Sc. Total 15.

12 ¹*hf*. Asst. Professor BAXTER. — Photochemistry, including the use of Optical Instruments in Chemistry. 3 Gr., 1 Se., 3 Ju., 3 Sc. Total 10.

7 ²*hf*. Mr. FREVERT. — Electrochemistry. 3 Gr., 2 Se., 2 Ju., 1 Sc. Total 8.

16 ¹*hf*. Asst. Professor TORREY. — The General Reactions of Organic Chemistry. 4 Gr., 3 Se., 2 Ju., 2 Sc. Total 11.

### COURSES OF RESEARCH.

20*b*. Professor C. L. JACKSON. — Organic Chemistry. 3 Gr., 2 G. S. Total 5.

20*c*. Asst. Professor TORREY. — Organic Chemistry. 4 Gr., 2 Se. Total 6.

20*e*. Professor SANGER. — Applied Chemistry. 1 Gr. Total 1.

20*f*. Asst. Professor BAXTER. — Inorganic Chemistry, including Determination of Atomic Weights. 12 Gr., 1 So., 2 Sc. Total 15.

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## Engineering.

*Primarily for Undergraduates:* —

1*c*. Asst. Professor LOVE, Messrs. GAYLORD and DOYEN. — Trigonometry, Algebra, and Analytic Geometry.
1 Ju., 1 So., 18 Fr., 14 Sp., 9 Sc. Total 43.

1*a* [1]*hf*. Asst. Professor LOVE and Mr. GAYLORD. — Algebra.
1 Ju., 8 So., 18 Fr., 5 Sp., 4 Sc. Total 36.

1*b* [1]*hf*. Asst. Professor LOVE and Mr. BRENKE. — Trigonometry.
2 G. S., 3 Se., 3 Ju., 5 So., 13 Fr., 6 Sp., 1 Sc. Total 33.

1*d* [2]*hf*. Asst. Professor LOVE and Mr. GAYLORD. — Analytic Geometry.
2 Ju., 12 So., 24 Fr., 14 Sp., 18 Sc. Total 70.

1*c*. Asst. Professor HUNTINGTON, Dr. H. N. DAVIS, and Mr. SHEPARD. — Differential and Integral Calculus.
2 G. S., 8 Ju., 9 So., 1 Fr., 9 Sp., 38 Sc. Total 67.

3*a*. Asst. Professor KENNEDY, and Messrs. A. E. NORTON, ALBEE, MCKAY, and BEARD. — Mechanical Drawing.
3 G. S., 5 Se., 9 Ju., 17 So., 44 Fr., 29 Sp., 23 Sc. Total 130.

3*b* [1]*hf*. Messrs. A. E. NORTON and LEWIS. — Descriptive Geometry. Elementary Shades, Shadows, and Perspective.
1 G. S., 5 Ju., 8 So., 4 Sp., 35 Sc. Total 53.

3*d* [2]*hf*. Asst. Professor KENNEDY and Mr. A. E. NORTON. — Mechanism. Study of Gearing and Mechanical Movements.
1 G. S., 5 Ju., 8 So., 2 Fr., 6 Sp., 37 Sc. Total 59.

4*a*. Asst. Professor HUGHES and assistants. — Plane and Topographical Surveying. (See page 95.)
1 G. S., 4 Se., 13 Ju., 29 So., 17 Fr., 14 Sp., 22 Sc. Total 100.

10*a*. Messrs. A. H. MORSE and MARKHAM. — Chipping, Filing, and Fitting. (See page 95.) 2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 7 Sc. Total 23.

10*b*. Messrs. A. H. MORSE and MARKHAM. — Blacksmithing. (See page 95.)
2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 7 Sc. Total 23.

10*c*. Messrs. A. H. MORSE and MARKHAM. — Pattern-making and Foundry Practice. (See page 95.) 2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 10 Sc. Total 26.

10*e*. Messrs. A. H. MORSE and MARKHAM. — Machine Shop Practice. (See page 95.) 2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 9 Sc. Total 25.

5*b* [1]*hf*. Professor L. J. JOHNSON and Mr. NICHOLS. — Elementary Statics. Graphic and Algebraic Methods.
4 G. S., 2 Se., 11 Ju., 18 So., 1 Fr., 13 Sp., 45 Sc. Total 94.

5*e* [2]*hf*. Asst. Professor HUNTINGTON, and Messrs. CAMP and NICHOLS. — Elementary Kinematics and Kinetics.
1 G. S., 1 Se., 9 Ju., 8 So., 10 Sp., 33 Sc. Total 62.

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*5d* ²*hf*. Mr. A. E. NORTON. — Resistance of Materials (introductory course for students of Architecture). Elementary Structural Design.
3 G. S., 2 So., 5 Sc. Total 10.

*11a* ²*hf*. Professor REEVE (Worcester Polytechnic Institute), and Messrs. MARKHAM and ANDRUS. — Steam Machinery (introductory course).
1 Gr., 4 Se., 7 Ju., 12 So., 8 Fr., 17 Sp., 46 Sc. Total 95.

*For Undergraduates and Graduates:* —

*4d*. Asst. Professor HUGHES and assistants. — Railroad Engineering (first course). (See page 95.)
1 G. S., 2 Se., 10 Ju., 16 So., 14 Fr., 12 Sp., 20 Sc. Total 75.

*5a*. Professor HOLLIS, Asst. Professor HUNTINGTON, and Messrs. A. H. MORSE and FORTÉ. — Applied Mechanics, including Resistance of Materials.
1 Gr., 1 G. S., 9 Se., 11 Ju., 3 So., 6 Sp., 24 Sc. Total 55.

*6a* ²*hf*. Asst. Professor HUGHES and Mr. ANDRUS. — Hydraulics and Hydraulic Motors. 1 Gr., 2 G. S., 8 Se., 10 Ju., 6 So., 6 Sp., 24 Sc. Total 57.

*12b* ¹*hf*. Mr. A. H. MORSE. — Elements of Thermodynamics. Theory of Heat Engines. 2 Gr., 1 G. S., 7 Se., 12 Ju., 3 So., 8 Sp., 25 Sc. Total 58.

*13a*. Professor HOLLIS, and Messrs. A. H. MORSE and DURFEE. — Engineering Laboratory. Introductory course in experimental methods.
2 Gr., 1 G. S., 9 Se., 9 Ju., 3 So., 6 Sp., 23 Sc. Total 53.

*14a*. Asst. Professor KENNEDY. — Machine Design (introductory course).
4 Se., 8 Ju., 4 Sp., 9 Sc. Total 25.

*16a*. Professors KENNELLY and ADAMS, and Messrs. WHITING and CROSSE. — Generation, Transmission, and Utilization of Electrical Energy (elementary course). 1 Gr., 2 G. S., 7 Se., 2 Ju., 2 So., 3 Sp., 9 Sc. Total 26.

*16c* ¹*hf*. Professor KENNELLY and Mr. CROSSE. — Direct Current Dynamo-Electric Machinery. 1 G. S., 3 Se., 8 Ju., 2 So., 10 Sc. Total 24.

*16g* ²*hf*. Professor KENNELLY and Mr. CROSSE. — Elementary Alternating Currents and Alternating Current Machinery.
1 G. S., 3 Se., 7 Ju., 2 So., 10 Sc. Total 23.

*Primarily for Graduates:* —

*4e* ²*hf*. Asst. Professor HUGHES. — Road Engineering.
1 G. S., 2 Se., 1 Ju., 3 So., 11 Sc. Total 18.

*4f* ¹*hf*. Asst. Professor HUGHES. — Railroad Engineering (second course). Problems in railroad construction and maintenance.
3 Ju., 3 So., 11 Sc. Total 17.

*5f*. Professor L. J. JOHNSON. — Applied Mechanics (second course). Problems involved in the design of Bridges and Buildings.
1 G. S., 10 Sc. Total 11.

*5g*¹. Professor HOLLIS. — Applied Mechanics (second course). Problems involved in the design of Machinery and Boilers. 14 Sc. Total 14.

*6c* ¹*hf*. Asst. Professor HUGHES. — Water Supply and Sanitary Engineering.
2 G. S., 1 Sp., 11 Sc. Total 14.

*6d* ²*hf*. Mr. SAFFORD. — Hydraulic Measurement. River, Harbor, Canal and Irrigation Works. 1 G. S., 11 Sc. Total 12.

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7*a*. Professor L. J. JOHNSON. — Bridges and Buildings. Design of Framed Structures. 1 G. S., 10 Sc. Total 11.

8*a* [1]*hf*. Professor L. J. JOHNSON and Asst. Professor HUGHES. — Building Stones, Masonry and Foundations.
6 G. S., 3 Se., 3 Ju., 2 So., 5 Sc. Total 19.

12*a* [2]*hf*. Professor REEVE (Worcester Polytechnic Institute). — Efficiency and Economics of Heat Engines. 1 Sp., 14 Sc. Total 15.

13*b*[2]. Professor HOLLIS and Mr. GILSON. — Engineering Laboratory (second course). 14 Sc. Total 14.

14*b*[1]. Professor HOLLIS, Asst. Professor KENNEDY, and Mr. GILSON. — Machine Design (second course). Study and design of steam machinery.
14 Sc. Total 14.

16*e*. Professor ADAMS and Mr. STURGES. — Alternating Currents and Alternating Current Machinery. 1 G. S., 1 Se., 2 Ju., 12 Sc. Total 16.

16*d*. Professor ADAMS and Mr. STURGES. — Dynamo Design.
1 Gr., 1 G. S., 1 Ju., 12 Sc. Total 15.

16*f*. Mr. WHITING. — Electrical Engineering Laboratory.
1 G. S., 1 Ju., 12 Sc. Total 14.

17*a* [1]*hf*. Professor KENNELLY. — Electric Transmission and Distribution of Power. 1 G. S., 1 Se., 1 Ju., 1 Sp., 12 Sc. Total 16.

17*b* [2]*hf*. Professor KENNELLY. — Telegraphy and Telephony.
1 G. S., 1 Se., 1 Ju., 13 Sc. Total 16.

21[2]. Conference on Engineering Subjects. 1 Ju., 1 Sp., 27 Sc. Total 29.

22[2]. Asst. Professor WYMAN. — Contracts and Specifications. General Principles of Common Law governing Construction Contracts.
1 Gr., 7 G. S., 3 Se., 2 Ju., 2 Sp., 43 Sc. Total 58.

COURSES IN SPECIAL FIELDS.

*Primarily for Graduates:* —

20*a*. Professor ADAMS. — Alternating Current Machinery. 1 Gr., 2 So. Total 3.

20*d*. Professor L. J. JOHNSON. Reinforced Concrete. 1 G. S. Total 1.

20*i*. Asst. Professor HUGHES. — Specifications and Cost Data for Civil Engineering Construction. 1 Gr., 2 G. S. Total 3.

20*j*. Professor ADAMS. — Commutation in Direct Current Machines.
1 Gr. Total 1.

## Forestry.

*None of the courses in Forestry can be counted towards the degree of A.B.*

*For Undergraduates and Graduates:* —

1*a* [1]*hf*. Asst. Professor FISHER. — Elements of Silviculture.
3 G. S., 2 Se., 4 So., 5 Sc., 1 Bu. Total 15.

1*b* [2]*hf*. Asst. Professor FISHER. — Practical Silviculture.
2 G. S., 1 Se., 3 So. Total 6.

2. Mr. MACKAYE. — Forest Measurements. 3 G. S., 3 So., 1 Bu. Total 7.

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3. Mr. JACK. — Forest Botany.
2 G. S., 2 Se., 1 So., 2 Sp., 3 Sc., 1 Bu. Total 11.

4 ²*hf*. Mr. JACK. — Forest Protection.
1 Gr., 4 G. S., 1 Se., 2 So., 2 Sc. Total 10.

5 ¹*hf*. Mr. MACKAYE. — Forest History. 1 Gr., 3 G. S., 4 Sc. Total 8.

6². Asst. Professor CARY. — Lumbering. 1 Gr., 3 G. S., 3 Sc. Total 7.

7. Asst. Professor FISHER. — Forest Management.
1 Gr., 3 G. S., 3 Sc. Total 7.

8 ²*hf*. Asst. Professor CARY. — Forest Technology.
1 Gr., 3 G. S., 3 Sc. Total 7.

## Botany.

*Primarily for Undergraduates:* —

1 ²*hf*. Professor GOODALE, assisted by Dr. CHRYSLER. — Botany (introductory course). 11 Se., 15 Ju., 35 So., 66 Fr., 14 Sp., 6 Sc. Total 147.

2 ¹*hf*. Professor THAXTER, assisted by Dr. A. F. BLAKESLEE and Mr. J. J. GROSSENBACHER. — Morphology of Plants.
1 Gr., 1 G. S., 5 Se., 10 Ju., 10 So., 2 Fr., 5 Sp., 4 Sc. Total 38.

*For Undergraduates and Graduates:* —

3*a* ¹*hf*. Asst. Professor JEFFREY, assisted by Dr. CHRYSLER. — Morphology, Histology, and Cytology of Flowering Plants.
2 Se., 2 Ju., 2 So., 1 Sp. Total 7.

3*b* ²*hf*. Asst. Professor JEFFREY, assisted by Dr. CHRYSLER. — Œcology and Physiology of Flowering Plants. 2 Se., 2 Ju., 3 So., 1 Sp., 1 Sc. Total 9.

5. Professor GOODALE and Mr. AMES. — Outlines of Economic Botany.
1 So., 1 Fr., 1 Sp. Total 3.

6 ²*hf*. Professor THAXTER and an assistant. — The Bacteria, Mycetozoa, and Higher Fungi. 1 Gr., 1 Se., 4 Ju., 1 Sp. Total 7.

7. Asst. Professor FERNALD. — Classification and Distribution of Flowering Plants, with special reference to the Flora of New England and the Maritime Provinces. 1 Gr., 2 Ju., 1 Sp. Total 4.

9 ¹*hf*. Asst. Professor JEFFREY, assisted by Dr. CHRYSLER. — The Anatomy, Development, and Phylogeny of the Siphonogamia (Higher Gymnosperms and the Angiosperms). 1 Gr., 2 Ju., 1 So., 1 Sc. Total 5.

*Primarily for Graduates:* —

COURSES OF RESEARCH.

20*a*. Professor GOODALE and Asst. Professor JEFFREY. — Experimental Vegetable Physiology. Economic Botany, with special reference to Tropical Plants. Structure and Development of Vascular Plants. 2 Gr. Total 2.

20*b*. Professors FARLOW and THAXTER. — Structure and Development of Cryptogams. 1 Gr. Total 1.

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## Zoölogy.

*Primarily for Undergraduates:* —

1 ¹*hf.* Professor G. H. PARKER, assisted by Mr. CONGDON. — Zoölogy (introductory course).
3 Gr., 7 Se., 13 Ju., 34 So., 62 Fr., 17 Sp., 10 Sc., 1 Bu. Total 147.

2 ²*hf.* Asst. Professor CASTLE, assisted by Mr. BANTA. — Morphology of Animals. 11 Ju., 6 So., 8 Fr., 1 Sp., 5 Sc. Total 31.

*For Undergraduates and Graduates:* —

3. Dr. H. W. RAND and Mr. ESTERLY. — Comparative Anatomy of Vertebrates. 3 Gr., 7 Se., 5 Ju., 2 So., 1 Fr., 3 Sc. Total 21.

4 ¹*hf.* Professor MARK and Dr. H. W. RAND. — Microscopical Anatomy.
2 Gr., 1 Se., 1 So. Total 4.

5 ²*hf.* Professor MARK and Dr. H. W. RAND. — Embryology of Vertebrates. Early Stages of Development. 5 Gr., 2 Se., 1 So. Total 8.

9*a* ¹*hf.* Asst. Professor R. T. JACKSON. — Fossil Invertebrates. 8 Gr. Total 8.

9*b* ²*hf.* Asst. Professor R. T. JACKSON. — Fossil Invertebrates. 2 Gr. Total 2.

14 ¹*hf.* Professor G. H. PARKER. — Comparative Histology. Muscular and Sustentative Tissues. 6 Gr., 2 Se., 1 Sc. Total 9.

*Primarily for Graduates:* —

10*a* ¹*hf.* Asst. Professor CASTLE. — Influences of the Environment on Animal Form. 8 Gr. Total 8.

10*b* ²*hf.* Asst. Professor CASTLE. — The Nature and Causes of Sex.
7 Gr., 1 G. S., 1 Se. Total 9.

16 ²*hf.* Professor G. H. PARKER. — The Structure and Functions of the Nervous System and its Relation to Animal Habits. Central Nervous Organs.
7 Gr., 1 Se., 1 Sc. Total 9.

### COURSE OF RESEARCH.

20. Professor MARK, Asst. Professor R. T. JACKSON, Professor G. H. PARKER, and Asst. Professor CASTLE. — Zoölogical Investigations. 9 Gr. Total 9.

## Geology.

### GEOLOGY AND GEOGRAPHY.

*Primarily for Undergraduates:* —

4 ¹*hf.* Professors DAVIS and WOLFF, and Asst. Professor WOODWORTH, assisted by Messrs. EGGLESTON, F. H. SAWYER, and LAHEE. — Dynamical and Structural Geology.
1 Gr., 9 Se., 16 Ju., 15 So., 15 Fr., 12 Sp., 30 Sc. Total 98.

5 ²*hf.* Asst. Professor WOODWORTH, assisted by Mr. EGGLESTON. — Historical Geology. 9 Se., 7 Ju., 10 So., 7 Fr., 8 Sp., 14 Sc. Total 55.

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PHYSIOGRAPHY.

*A* 1*hf.* Professor DAVIS, Asst. Professor D. W. JOHNSON, and Mr. SAUNDERS. — Physiography of the Lands.
2 G. S., 5 Se., 4 Ju., 9 So., 16 Fr., 7 Sp., 6 Sc., 1 Bu. Total 50.

*B* 2*hf.* Asst. Professor WARD and Mr. SAUNDERS. — Meteorology (elementary course). 3 Se., 3 Ju., 5 So., 4 Fr., 2 Sp., 2 Sc. Total 19.

1 1*hf.* Asst. Professor WARD. — Meteorology (second course).
1 Se., 1 So., 1 Sp. Total 3.

*For Undergraduates and Graduates:* —

GEOLOGY.

8 1*hf.* Asst. Professor WOODWORTH and Dr. MANSFIELD. — Advanced General Geology. 2 Gr., 1 Se., 1 Ju., 5 So., 1 Sp., 2 Sc. Total 12.

16 2*hf.* Asst. Professor WOODWORTH. — Glacial Geology.
2 Gr., 3 Se., 1 Ju., 3 So., 1 Sp., 3 Sc. Total 13.

22. Dr. MANSFIELD. — Advanced Geological Field Work. Areal Geology in the vicinity of Boston. 1 Gr., 1 Se., 1 Sc. Total 3.

PALAEONTOLOGY.

11. Asst. Professor R. T. JACKSON. — Palaeontology.
1 Gr., 1 So., 1 Sp., 1 Sc. Total 4.

15. Asst. Professor R. T. JACKSON. — Advanced Historical Geology.
2 Gr., 1 Sc. Total 3.

ECONOMIC GEOLOGY.

10. Professor H. L. SMYTH, assisted by Mr. J. B. MARVIN and Mr. E. E. WHITE. — Mining Geology. 2 Gr., 4 Se., 5 Ju., 2 So., 4 Sp., 5 Sc. Total 22.

PHYSIOGRAPHY.

6 2*hf.* Asst. Professor D. W. JOHNSON and Mr. MERWIN. — Physiography of the United States.
2 Gr., 1 G. S., 4 Se., 3 Ju., 3 So., 6 Fr., 4 Sp., 3 Sc., 1 Bu. Total 27.

CLIMATOLOGY.

2 2*hf.* Asst. Professor WARD. — Climatology of the United States.
1 Gr., 1 Se., 3 So., 3 Sc. Total 8.

19 1*hf.* Asst. Professor WARD. — General Climatology. 1 Gr., 1 Ju. Total 2.

*Primarily for Graduates:* —

COURSES OF RESEARCH.

GEOLOGY.

20*c.* Professors DAVIS, WOLFF, and H. L. SMYTH, and Asst. Professor WOODWORTH. — Geological Investigation in the Field and Laboratory.
1 Gr. Total 1.

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Economic Geology.

20b. Professor H. L. Smyth. — Mining Geology (advanced course).
1 Ju. Total 1.

Physiography.

‡20a. Professor Davis. — Physiography (advanced course).
4 Gr., 2 Se., 1 So., 1 Sc. Total 8.

Climatology.

20c. Asst. Professor Ward. — Climatology (advanced course). 2 Gr. Total 2.

## Mineralogy and Petrography.

*Primarily for Undergraduates: —*

2. Asst. Professor Palache, assisted by Mr. R. W. Richards. — Mineralogy (including Crystallography, Physical and Chemical Mineralogy, and Descriptive Mineralogy).
2 Gr., 7 Se., 6 Ju., 2 So., 3 Sp., 8 Sc. Total 28.

*For Undergraduates and Graduates: —*

7 ½*f*. Asst. Professor Palache. — Advanced Mineralogy and Crystallography.
3 Gr., 1 G. S. Total 4.

8 ½*f*. Professor Wolff. — Optical Crystallography.
1 Gr., 1 G. S., 1 So. Total 3.

12. Professor Wolff, assisted by Mr. R. W. Richards. — Petrography.
3 Gr., 2 G. S., 2 Se., 1 So., 1 Sp., 1 Sc. Total 10.

*Primarily for Graduates: —*

14 ½*f*. Professor Wolff. — Advanced Petrography. 1 Gr., 1 G. S. Total 2.

## Mining and Metallurgy.

*Primarily for Undergraduates: —*

1 ½*f*. Professor H. L. Smyth and Asst. Professor Raymer, assisted by Mr. J. B. Marvin. — Elements of Mining. Prospecting, exploring, development and the principles of exploitation. Stamp-milling and ore-concentration.
1 Gr., 1 G. S., 2 Se., 2 Ju., 2 So., 2 Sp., 3 Sc. Total 13.

6 ½*f*. Asst. Professor C. H. White, assisted by Mr. E. M. Sawyer. — Metallurgical Chemistry. 1 G. S., 3 Se., 5 Ju., 4 So., 1 Sp., 4 Sc. Total 18.

9 ½*f*. Professors Sauveur and Peters, and Mr. H. M. Boylston, assisted by Mr. J. B. Marvin. — General Metallurgy.
1 Gr., 2 G. S., 7 Se., 12 Ju., 6 So., 3 Fr., 5 Sp., 8 Sc. Total 44.

10 ½*f*. Asst. Professor Raymer, assisted by Mr. E. M. Sawyer. — Fire Assaying.
1 G. S., 3 Se., 3 Ju., 2 So., 1 Sp., 5 Sc. Total 15.

*For Undergraduates and Graduates: —*

2 ½*f*. Professor Sauveur and Mr. H. M. Boylston, assisted by Mr. E. E. White. — Metallurgy of Iron and Steel.
1 Gr., 1 G. S., 4 Se., 7 Ju., 5 So., 10 Sp., 19 Sc. Total 47.

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3 ²*hf*. Professor PETERS, assisted by Mr. E. M. SAWYER. — Metallurgy of Copper, Lead, Zinc, and the Minor Metals, and of the Precious Metals in connection with Copper and Lead.
2 Gr., 2 Se., 2 Ju., 2 So., 7 Sc. Total 15.

4 ². Asst. Professor RAYMER, assisted by Mr. E. E. WHITE. — Ore-dressing, Concentration, and Milling. 1 Gr., 1 G. S., 1 Se., 2 So., 4 Sc. Total 9.

5 ¹*hf*. Professor H. L. SMYTH, assisted by Mr. E. E. WHITE. — Metal and Coal Mining; Exploitation. 1 Se., 1 So., 1 Sp., 3 Sc. Total 6.

7. Asst. Professor C. H. WHITE. — Metallurgical Chemistry (advanced course).
2 Sp. Total 2.

11 ²*hf*. Asst. Professor RAYMER. — Mining Plant.
1 Gr., 2 G. S., 1 Se., 4 Sc. Total 8.

12. Asst. Professor RAYMER. — Mining. The study of mining operations.
1 G. S., 1 Ju., 1 So., 1 Sp., 1 Sc. Total 5.

14 ²*hf*. Professor SAUVEUR and Mr. H. M. BOYLSTON. — Metallography.
1 G. S., 1 So., 1 Sp. Total 3.

15 ²*hf*. Professor PETERS. — Metallurgy of Zinc, Nickel, Tin, Mercury, and the Minor Metals. 1 Se., 1 Ju., 1 So., 1 Sp., 1 Sc. Total 5.

*Primarily for Graduates:* —

8¹. Asst. Professor C. H. WHITE. — Leaching Processes for Gold and Silver Ores. 2 G. S., 1 Se. Total 3.

17¹. Asst. Professor RAYMER. — Mine Surveying. 1 G. S., 1 Se. Total 2.

22¹. Asst. Professors RAYMER and C. H. WHITE. — Problems in the Treatment of Ores. 2 G. S. Total 2.

24². Professor H. L. SMYTH. — Mine Examination and Reports.
1 G. S. Total 1.

26 ²*hf*. Professor PETERS. — Advanced Course in the Metallurgy of Copper, Lead, and the Minor Metals. 2 Se., 2 So., 1 Sp., 2 Sc. Total 7.

28 ¹*hf*. Dr. MANSFIELD. — Geological Surveying.
1 Gr., 1 G. S., 2 So., 1 Sp., 3 Sc. Total 8.

30². THE INSTRUCTORS IN THE DEPARTMENT. — Mining and Metallurgical Projects and Design. 3 G. S. Total 3.

COURSE OF RESEARCH.

20. Professor SAUVEUR. — Metallurgy and the Physics of Metals.
1 So., 2 Sp. Total 3.

## Anthropology.

*Primarily for Undergraduates:* —

1. Asst. Professor DIXON and Dr. TOZZER, assisted by Mr. SPINDEN. Occasional lectures by Professor PUTNAM — General Anthropology.
9 Se., 18 Ju., 37 So., 2 Fr., 6 Sp., 1 Bu. Total 73.

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*For Undergraduates and Graduates: —*

5. Asst. Professor Dixon, assisted by Mr. Spinden. Occasional lectures by Professor Putnam. — American Archaeology and Ethnology.
1 Gr., 12 Se., 17 Ju., 48 So., 3 Fr., 5 Sp. Total 86.

4 1/2 *hf.* Dr. Charles Peabody. — Prehistoric Archaeology. European Ethnography. 2 Gr., 3 Se., 1 So., 1 Sp. Total 7.

7 1/2 *hf.* Asst. Professor Dixon. — Ethnology of Oceania.
3 Gr., 1 Se., 2 Ju., 1 So. Total 7.

*Primarily for Graduates: —*

‡8 1/2 *hf.* Asst. Professor Dixon. — American Indian Languages. 1 Gr. Total 1.

‡9 1/2 *hf.* Dr. Tozzer. — Archaeology and Hieroglyphic Systems of Central America.
3 Gr., 4 Se., 1 So. Total 8

Courses of Research.

‡20*a*. Professor Putnam. — American Archaeology and Ethnology.
2 Gr., 1 Se., 2 So. Total 5.

‡20*d*. Asst. Professor Dixon. — General Ethnology. 3 Gr. Total 3.

‡20*e*. Dr. Tozzer. — Central American and Mexican Hieroglyphic and Picture Writing. 1 Se. Total 1.

### Anatomy, Physiology, and Hygiene.

*Courses in Anatomy, Physiology, and Hygiene may be counted towards the degree of S.B. only, with the exception of Course 1, which may also be counted towards the degree of A.B.*

1. Drs. Darling, Provandie, Bacon, Hapgood and Jouett. — Elementary Anatomy and Physiology. Personal Hygiene. Emergencies.
19 Se., 42 Ju., 74 So., 13 Fr., 6 Sp., 6 Sc. Total 160.

5 1/2 *hf.* Dr. D. A. Sargent. — Applied Anatomy and Animal Mechanics.
2 Se., 1 Sp. Total 3.

In accordance with the vote of the President and Fellows whereby the Faculty may under certain conditions authorize a Doctor of Philosophy or a Doctor of Science to give instruction gratuitously or for such fees as he may himself collect, Benjamin Apthorp Gould Fuller, Ph.D., was authorized to give in the second half-year a course in the Enneads of Plotinus.

### *The Larger Courses of Study.*

The following table shows, for the last three academic years, the number of enrolments in every course containing more than a hundred students: —

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| Course. | Number of Students in 1904–05. | in 1905–06. | in 1906–07. |
|---|---|---|---|
| Greek 11 | | | 143 |
| Latin *B* | 136 | 125 | 152 |
| Latin 10 | | 115 | |
| English *A* | 563 | 504 | 525 |
| English 31 | 211 | 175 (Eng. D) | 227 |
| English 28 | 110 | 104 | 144 |
| English 2 | 120 | 112 | |
| English 42*b* | | 102 | |
| English 15 | | 129 | |
| English 7*b* | | | 217 |
| English 8*a* | | 160 | 104 |
| English 8*b* | | 127 | |
| English 33 | | 131 | |
| German *A* | 289 | 243 | 330 |
| German 25 | | | 121 |
| French *A* | 144 | 119 | 134 |
| French 2*c* | 196 | 165 | 105 |
| French 2*a* | 107 | 104 | 110 |
| Comparative Literature 1 | | | 122 |
| Comparative Literature 12 | | | 166 |
| History 1*a* | 380 | 331 | 303 |
| History 12*a* | | 102 | 126 |
| History 12*b* | | | 115 |
| History 16*a* | 179 | 141 | 132 |
| History 16*b* | 159 | 125 | 113 |
| History 18 | 139 | 108 | 104 |
| Government 1 | 431 | 384 | 383 |
| Government 16 | | 116 | |
| Economics 1 | 438 | 470 | 392 |
| Economics 7 (Econ. 7*b*) | | 137 | |
| Economics 5 | 139 | 138 | 205 |
| Economics 6*b* | | | 112 |
| Economics 9*b* | | | 236 |
| Economics 8*b* | | 105 | |
| Economics 21 | 182 | 150 | 152 |
| Philosophy 1*a* | 215 | 226 | |
| Philosophy *A* | | | 124 |
| Philosophy *B* | | | 170 |
| Philosophy *D* | | | 133 |
| Philosophy *E* | | | 216 |
| Social Ethics 1 (Phil. 5) | 122 | 165 | 175 |
| Fine Arts 3 | | | 107 |
| Astronomy 1 | 130 | 166 | |
| Physics *C* | 198 | 180 | 190 |
| Chemistry 1 | 332 | 311 | 298 |
| Chemistry 3 | | | 109 |
| Engineering 1*a* | 121 | 111 | |
| Engineering 1*b* | 161 | 153 | |
| Engineering 1*d* | 127 | 127 | |
| Engineering 3*a* | 145 | 148 | 130 |
| Engineering 4*a* | 107 | 103 | |
| Engineering 5*b* | 125 | 104 | |
| Engineering 11*a* | 119 | 103 | |
| Botany 1 | 219 | 147 | 147 |
| Zoölogy 1 | 184 | 119 | 147 |
| Anatomy, Physiol., & Hygiene | 139 | 153 | 160 |

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Economics 1, with seventy-eight students less than in 1905–06, remains the largest elective course. Government 1 follows it closely. The only other course with more then three hundred students is History 1*a*.

*Summer Courses of Instruction.*

The following courses (sixty-one as compared with sixty in 1906) were given, under the direction of the Faculty, in the summer of 1907. The abbreviations, with the addition of S.S. for "member of the Summer School," are the same as those in the preceding list. A hand ☞ points to each course that may be counted toward a degree: —

**Anthropology.**

☞ Dr. A. M. Tozzer. — General Anthropology. 5 times a week, for 6 weeks. 4 Ju., 10 So., 3 Fr., 3 S. S. Total 20.

**Architecture.**

Asst. Professor Mowll. — Architectural Design. 5 times a week, for 6 weeks. 1 G. S., 1 Sc., 1 S. S. Total 3.

☞ Professor H. L. Warren. — History of European Architecture to about 1000 A.D. 5 times a week, for 6 weeks. 3 Ju., 5 So., 3 Fr., 1 Sp., 1 R., 1 S. S. Total 14.

☞ Professor H. L. Warren. — History of European Architecture from about 1000 A.D. to the close of the Renaissance. 5 times a week, for 6 weeks. 1 Ju., 2 So., 1 Med., 2 S. S. Total 6.

**Astronomy.**

☞ Dr. W. C. Brenke. — Elementary Course in Practical Astronomy. 5 times a week, for 6 weeks. 3 S. S. Total 3.

**Botany.**

☞ 81. Dr. R. G. Leavitt and Mr. L. J. Spalding. — Introductory Course: The Structure, Physiology, and Œcology of Flowering Plants. 5 times a week, for 6 weeks. 1 So., 6 S. S. Total 7.

☞ 82. Dr. M. A. Chrysler. — Advanced Course: Morphology and Œcology of Flowering Plants. 5 times a week, for 6 weeks. 1 Sp., 1 R., 6 S. S. Total 8.

**Chemistry.**

Asst. Professor Baxter and Mr. A. C. Boylston. — Elementary Chemistry. 5 times a week, for 6 weeks. 1 Se., 1 So., 1 R., 12 S. S. Total 15.

☞ Asst. Professor Baxter. — Quantitative Analysis. 5 times a week, for 6 weeks. 6 S. S. Total 6.

☞ Asst. Professor Torrey. — Organic Chemistry. 5 times a week, for 6 weeks. 1 Gr., 1 Sc., 1 Med., 7 S. S. Total 10.

☞ Asst. Professors Baxter and Torrey. — Chemical Research. 1 G. S., 1 Ju., 1 S. S. Total 3.

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### Education.

☞ Professor H. H. Horne (Dartmouth College). — Educational Psychology. 5 times a week, for 6 weeks. 1 So., 11 S. S. Total 12.

☞ Professor H. H. Horne (Dartmouth College). — General Principles of Education. 5 times a week, for 6 weeks. 1 So., 17 S. S. Total 18.

☞ Supt. Stratton D. Brooks (Boston). — Schools and School Systems. 5 times a week, for 6 weeks. 29 S. S. Total 29.

### English.

*A.* Mr. H. M. Rideout. — English Composition (elementary course). 5 times a week, for 6 weeks. 1 Gr., 39 S. S. Total 40.

*B.* Mr. W. R. Castle, Jr. — English Composition (advanced course). 5 times a week, for 6 weeks. 1 Gr., 1 So., 20 S. S. Total 22.

*C.* Dr. R. P. Utter (Amherst College). — English Composition (second advanced course). 5 times a week, for 6 weeks. 1 Gr., 9 S. S. Total 10.

*D.* Professor H. B. Huntington (Brown Univ.). — Argumentation. 5 times a week, for six weeks. 4 S. S. Total 4.

Professor H. B. Huntington (Brown Univ.). — College Admission Requirements in English. 5 times a week, for 6 weeks. 39 S. S. Total 39.

☞ Dr. H. de W. Fuller. — Anglo-Saxon. Anglo-Saxon Reader and Grammar. 5 times a week, for 6 weeks. 4 S. S. Total 4.

Dr. H. de W. Fuller. — Shakspere. 5 times a week, for 6 weeks. 5 S. S. Total 5.

Mr. H. M. Rideout. — English Literature of the Eighteenth Century. 5 times a week, for 6 weeks. 4 S. S. Total 4.

Mr. Copeland. — English Literature of the Nineteenth Century, from the publication of the Lyrical Ballads to the death of Tennyson. 5 times a week, for 6 weeks. 1 Gr., 1 R., 32 S. S. Total 34.

### Fine Arts.

☞ Asst. Professor Chase. — History of Ancient Art. 5 times a week, for 6 weeks. 2 Se., 5 Ju., 12 So., 8 Fr., 1 Sc., 3 Sp., 4 S. S. Total 35.

☞ Mr. F. G. Fitzpatrick. — Fine Arts of the Middle Ages. 5 times a week, for 6 weeks. 1 Se., 3 Ju., 8 So., 3 Fr., 1 Sp., 7 S. S. Total 23.

☞ Mr. M. Mower. — Elements of Drawing and Painting. 5 times a week, for 6 weeks. 1 So., 9 S. S. Total 10.

### French.

☞ Mr. W. B. Snow. — Intermediate French Course for Teachers. 5 times a week, for 6 weeks. 7 S. S. Total 7.

### Geography.

☞ Asst. Professor D. W. Johnson. — Physical Geography. Lectures, laboratory and field work. 5 times a week, for 6 weeks. 1 Ju., 9 S. S. Total 10.

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### Geology.

☞ Dr. G. R. MANSFIELD. — Field Course in Structural and Historical Geology. 6 times a week, for 5 weeks.
1 Se., 2 Ju., 1 So., 1 Fr., 2 Sp., 1 Gr., 2 S. S. Total 10.

☞ Professor WOLFF and Asst. Professor WOODWORTH. — Geological Field Investigation. 1 Sc. Total 1.

### German.

☞ Dr. BOESCHE. — Composition and Conversation; Methods of Teaching German. 5 times a week, for 6 weeks. 24 S. S. Total 24.

### Greek.

Asst. Professor GULICK. — Greek for Beginners. 5 times a week, for 6 weeks.
1 Sp., 4 S. S. Total 5.

Asst. Professor GULICK. — Advanced Course. 5 times a week, for six weeks.
1 R., 2 S. S. Total 3.

### History and Government.

☞ Professor W. S. FERGUSON (Univ. of California). — Roman History. 5 times a week, for 6 weeks. 1 So., 5 S. S. Total 6.

☞ Professor N. M. TRENHOLME (Univ. of Missouri). — Mediaeval European History. 5 times a week, for 6 weeks. 12 S. S. Total 12.

☞ Professor JONAS VILES (Univ. of Missouri). — American History. 5 times a week, for 6 weeks. 1 Ju., 14 S. S. Total 15.

☞ Asst. Professor MUNRO. — Civil Government. 5 times a week, for 6 weeks.
7 S. S. Total 7.

☞ Asst. Professor MUNRO. — Municipal Government. 5 times a week, for 6 weeks. 1 Se., 2 Ju., 4 So., 2 Fr., 1 Sp., 5 S. S. Total 15.

### Latin.

Asst. Professor E. K. RAND. — General Course for Teachers. 5 times a week, for 6 weeks. 19 S. S. Total 19.

☞ Asst. Professor E. K. RAND. — The Life and Works of Virgil. 5 times a week, for 6 weeks. 10 S. S. Total 10.

### Mathematics.

☞ Asst. Professor LOVE. — Advanced Algebra. 5 times a week, for 6 weeks.
1 So., 1 Fr., 12 S. S. Total 14.

☞ Mr. H. D. GAYLORD. — Solid Geometry. 5 times a week, for 6 weeks.
2 Sc., 6 S. S. Total 8.

☞ Dr. W. C. BRENKE. — Plane Trigonometry. 5 times a week, for 6 weeks.
2 Fr., 4 S. S. Total 6.

☞ Asst. Professor WHITTEMORE. — Plane Analytic Geometry. 5 times a week, for 6 weeks. 1 Ju., 2 So., 1 Sp., 1 Sc., 6 S. S. Total 11.

Professor OSGOOD. — Differential and Integral Calculus. 5 times a week, for 6 weeks. 1 So., 1 G. S., 2 Sc., 11 S. S. Total 15.

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### Music.

☞ Mr. HEILMAN. — Harmony and Simple Counterpoint. 4 times a week, for 6 weeks. 1 Fr., 1 Law, 6 S. S. Total 8.

☞ Mr. D. G. MASON. — Musical Analysis. 4 times a week, for 6 weeks. 3 Ju., 8 So., 2 Sp., 1 Law, 3 S. S. Total 17.

### Nature Study.

Professors F. E. LLOYD (Carnegie Desert Botanical Laboratory) and W. H. DUDLEY (Wisconsin State Normal School). — Course for Teachers. 5 times a week, for 6 weeks. 12 S. S. Total 12.

### Philosophy.

☞ Professor ROYCE. — General Introduction to Philosophy. 5 times a week, for 6 weeks. 1 Ju., 6 So., 1 Fr., 1 Sp., 18 S. S. Total 27.

☞ Professor ROYCE. — Introduction to Ethics. 5 times a week, for 6 weeks. 1 Ju., 4 So., 1 Fr., 1 Sp., 1 R., 14 S. S. Total 22.

### Physical Education.

Dr. SARGENT and assistants. — Elementary and advanced courses in theory. 5 weeks. 62 S. S. Total 62.

Dr. SARGENT and assistants. — Elementary and advanced courses in practice. 5 weeks. 117 S. S. Total 117.

### Physics.

Professor SABINE, Professor W. E. MCELFRESH (Williams College), and Dr. J. L. HOGG. — Elementary Experimental Physics. 5 times a week, for 6 weeks. 1 So., 1 Fr., 1 Di., 22 S. S. Total 25.

☞ *C.* Dr. H. W. MORSE. — Advanced Course in Physics. 5 times a week, for 6 weeks. 3 So., 1 Sp., 9 S. S. Total 13.

### Psychology.

☞ Dr. YERKES. — Descriptive Psychology. 5 times a week, for 6 weeks. 2 Se., 5 Ju., 3 So., 1 Sp., 1 Med., 13 S. S. Total 25.

☞ Dr. YERKES. — Applied Psychology. 5 times a week, for 6 weeks. 1 Ju., 3 So., 1 Med., 13 S. S. Total 18.

### Public Speaking, Platform Reading, Voice Training.

Asst. Professor WINTER and Mr. WILLARD. — Development of the Voice. 5 times a week, for 6 weeks. 1 So., 1 R., 17 S. S. Total 19.

Asst. Professor WINTER and Mr. WILLARD. — Reading and Oral Discussion. 5 times a week, for 6 weeks. 10 S. S. Total 10.

Asst. Professor WINTER and Mr. WILLARD. — Platform Speaking. 5 times a week, for 6 weeks. 15 S. S. Total 15.

Asst. Professor WINTER. — Oral Reading of English Classics. 3 times a week, for 6 weeks. 1 R., 41 S. S. Total 42.

### Spanish.

☞ Mr. G. L. LINCOLN. — Advanced Course. 5 times a week, for 6 weeks. 1 Ju., 1 So., 4 S. S. Total 6.

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### Engineering.

The following courses were given in the summer as part of the regular instruction of the Lawrence Scientific School. Some of them were given at Squam Lake, New Hampshire: —

4*a*. Asst. Professor HUGHES. — Plane Surveying. Field work. Daily, 6 weeks.
1 G.S., 4 Se., 13 Ju., 29 So., 17 Fr., 14 Sp., 21 Sc., 12 S.S. Total 111.

4*d*. Asst. Professor HUGHES. — Railroad Surveying. Daily, 5 weeks.
1 G. S., 2 Se., 10 Ju., 16 So., 14 Fr., 12 Sp., 19 Sc., 6 S. S. Total 80.

10*a*. Mr. A. H. MORSE, assisted by Mr. E. R. MARKHAM. — Chipping, filing, and fitting. 90 hours.
2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 7 Sc., 2 S. S. Total 25.

10*b*. Mr. A. H. MORSE, assisted by Mr. E. R. MARKHAM. — Blacksmithing. 90 hours. 2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 7 Sc., 2 S. S. Total 25.

10*c*. Mr. A. H. MORSE, assisted by Mr. E. R. MARKHAM. — Pattern Making, etc. 90 hours. 2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 10 Sc., 4 S. S. Total 30.

10*e*. Mr. A. H. MORSE, assisted by Mr. E. R. MARKHAM. — Machine-Shop Practice. 90 hours.
2 Se., 2 Ju., 7 So., 2 Fr., 3 Sp., 9 Sc., 2 S. S. Total 27.

The following table shows the enrolment in the Afternoon and Saturday Courses for teachers: —

| Subject and Instructor. | Men. | Women. | Total. |
|---|---|---|---|
| ARCHITECTURE: Mr. W. D. Swan, assisted by Mr. H. V. Skene | 1 | 1 | 2 |
| EDUCATION: | | | |
| General Principles: Professor Hanus | 30 | 10 | 40 |
| Applications of Psychology to Teaching: Asst. Professor Norton | 3 | — | 3 |
| FINE ARTS: | | | |
| Theory of Pure Design: Dr. Denman W. Ross, assisted by Mr. E. O. Parker | 10 | 33 | 43 |
| FRENCH. Associate Professor de Sumichrast | 1 | 7 | 8 |
| AMERICAN HISTORY. Professor Channing | 5 | 17 | 22 |
| LATIN. Professor Clifford H. Moore | 4 | 5 | 9 |
| MATHEMATICS. Professor W. F. Osgood, Asst. Professor E. V. Huntington, Dr. J. L. Coolidge | 1 | 4 | 5 |
| PRINCIPLES OF MUSIC. Asst. Professor W. R. Spalding | 3 | 2 | 5 |
| PHILOSOPHY. Professor Royce | 2 | 7 | 9 |
| PUBLIC SPEAKING. Asst. Professor I. L. Winter | — | 10 | 10 |
| | 60 | 96 | 156 |
| Deduct for names inserted more than once | | | 3 |
| | | | 153 |

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In February the Faculty voted: —

"1. That the Departments under this Faculty be invited to offer Afternoon and Saturday Courses of instruction, intended primarily for teachers in service, during the academic year 1907–08, the courses ordinarily to begin during the first week in December, 1907, and to close about April, 1908.

"2. That the fee for each course be fifteen dollars as at present.

"3. That the Committee may withdraw the offer of any course which has not attracted at least five students.

"4. That the Faculty authorizes the Committee to grant certificates on the recommendation of instructors to those students who do the required work and satisfactorily pass a final examination. The form of certificate proposed by the Committee is

HARVARD UNIVERSITY

AFTERNOON AND SATURDAY COURSES FOR TEACHERS

..... has attended courses of ..... lectures in ..... and has performed the required exercises (about ..... hours' work) and passed satisfactorily in a final examination."

## VOTES RELATING TO DEGREES.

In December the Faculty added *Mining and Metallurgy* to the subjects in which students may become candidates for the degree of S.D.; in February it added *Education* and the *History and Principles of the Fine Arts* to the subjects in which students may become candidates for the degree of Ph.D.; in December it changed the statement of the requirements for the degree of S.M. in accordance with the following vote: —

"The candidate shall have done the equivalent of the four-year programme of study in the Lawrence Scientific School in the subject which he wishes to pursue."

Since the degree of S.B. may now be obtained in Harvard College without special attention to Science, it is no longer possible to accept this degree, without qualifications, as a basis of work for the degree of S.M.

## AWARD OF PRIZES.

I print the names of students who, in 1906–07, won prizes in competitions recognized by the Faculty: —

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| Prize, — Amount. | For what. | Name and Academic Position. |
|---|---|---|
| Jeremy Belknap, $50 | Translation into French of a passage from Matthew Arnold's Essay on Joubert. | Edmund Charles Wendt, Freshman. |
| Bowdoin, $250 | Tennyson and his Literary Heritage. | Alain LeRoy Locke, Sophomore. |
| " $200 | The Motion of a Violin String. | Harvey Nathaniel Davis, Instructor. |
| " $200 | The Spread of Greek Influence through Translations in the Fifteenth Century. | Dean Putnam Lockwood, 4 Graduate. |
| " $100 | Lessing and Johnson in relation to their Critical Heritage: A Comparative Study. | Hyman Askowith, Senior. |
| " $100 | De vita operibusque Rinucci Aretini. | Dean Putnam Lockwood, 4 Graduate. |
| " $50 | Translation into Attic Greek. | Harry Wheatland Litchfield, Senior. |
| " $50 | Translation into Latin. | Frederick Livesey, Junior. |
| " $50 | The Metropolitan Water System of Boston. | Abraham Edward Pinanski, Sophomore. |
| " $50 | The Stone Insurrection: A Study in Southern Slavery. | Robert Neil Thompson, Senior. |
| Boylston, $60 | For Elocution. | Isaiah Leo Sharfman, Senior. |
| " $60 | " " | Gilbert Julius Hirsch, Senior. |
| " $45 | " " | Artemas Russell Ellis, Senior. |
| " $45 | " " | Edwin French Tyson, Senior. |
| " $45 | " " | Marston Allen, Junior. |
| Coolidge, $100 | Trials for Harvard-Yale Debate. | Henry Hurwitz, Junior. |
| " $100 | Trials for Harvard-Princeton Debate. | Edward Rieman Lewis, Junior. |
| Dante, $50 (½ prize) | Characteristics of the Vita Nuova. | Alexander Guy Holborn Spiers, 3 Graduate. |
| Franklin, $250 | For the best undergraduate essay in History 10 on Frank- | Henry Raven Gilbert, Sophomore. |
| Lloyd McKim Garrison, $100 and a silver medal | Poem "Tschaikowsky." [lin's works. | Robert Emmons Rogers, Sophomore. |
| Pasteur Medal | For a debate on a subject drawn from Contemporary French | Isaac Dimond, Sophomore. |
| Wendell Phillips, $50 | For oratorical power. [Politics. | Myron Colver Leckner, Senior. |
| Ricardo Prize Scholarship, $350 | | Aaron Prussian, Junior. |
| Sargent, $100 | Translation into verse of the thirty-seventh Ode of the First Book of Horace. | Richard John Walsh, Senior. |
| Sohier, $250 | Best thesis of successful candidate for Honors in English or Modern Literature. | Divided between Hermann Hagedorn, Jr., Sen., and Samuel Montefiore Waxman, Senior. |
| Toppan, $150 | The Government and Parties of Japan. | Fred Wayne Catlett, 3 Law. |
| Philip Washburn, $75 | The Economic Aspects of the Peasants' War in Germany, 1525. | Harrison Clifford Dale, Senior. |
| David A. Wells, $500. | The Stannaries: A Study of the English Tin Miner. | George Randall Lewis, Ph.D. |

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The Faculty had a singularly uneventful and peaceful year. The most important communication which it received came in January from the Board of Overseers: —

"1. That in the opinion of this Board no subject or branch of instruction involving additional expense should be added to the courses at present in charge of the Faculty of Arts and Sciences except after mature deliberation of the governing boards of the University.

"2. That the Faculty of Arts and Sciences be and hereby is requested to undertake a comprehensive revision of the present scheme of instruction with a view to securing more concentration of effort, increased educational efficiency, and, if practicable, diminished expenditure."

This communication was referred to the Committee on Instruction for consideration and report.

The document consists of a recommendation and a request, both resulting from the Board's study of the Elective Pamphlet in connection with the heavy deficits of preceding years. The recommendation concerns new Departments such as every university is tempted to establish with inadequate endowments or with no endowments at all. This subject touches the relation of the American college to the American University, — the waste of energy, of money, and of educational influence in the elevation of more than a few colleges into universities, and the waste from the competition of universities in the more remote subjects of learning. The questions suggested by this paragraph of the Overseers' communication are of immense educational importance; but unless the government of Harvard University is radically changed, they are not questions for the Faculty of Arts and Sciences, which rarely hears of new Departments till they have been established by the governing boards. A gift or a guarantee or the strong pressure of persons interested leads to engagements with new instructors or professors in new subjects; and these engagements are to all intents and purposes made before the matter reaches the Committee on Instruction. This Committee gets its first information from manuscript or proof presented to it for the Elective Pamphlet. It concerns itself therefore with the question whether the courses offered in the new subject are substantial courses, not whether instruction in the new subject shall or shall not be established.

A somewhat similar difficulty faces the Faculty in regard to the second paragraph of the Overseers' communication. The Committee on Instruction had already studied the Elective Pamphlet from beginning to end, testing, with the aid of the chairmen of the several

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Departments, every course about the value of which there was any doubt (*provided the teaching force remained what it was*). There are but two methods of reducing the elective offering and saving expense thereby: (1) by reducing the number of teachers in charge of courses, that is, by discharging members of the Faculty; (2) by cutting off annual appointments, and requiring professors to do the work now done by assistants.

With the first of these methods the Faculty has nothing to do. Even additions to its staff are determined without its knowledge or the knowledge of the Committee on Instruction; sometimes without the knowledge of the Departments most intimately concerned. Again, a newly appointed professor may come with distinct assurance that he shall teach certain parts of his subject to which he has given special attention — in short, that he may plan his teaching almost or quite as he pleases. Much may be said for this policy as a means of attracting valuable men and keeping their enthusiasm — as truly a university method; but it is not a policy that tends toward what the Overseers have in mind.

All this bears on the feasibility of the second method of reducing the elective offering. Many of the best professors would not come or would not stay if required to do the work now performed by assistants, — if required, for example, to read hundreds of examination books and to mark thousands of elementary exercises; nor is such work an economical expenditure of time and strength for men whose scholarship and salaries are high. Yet unless it is done by somebody, the standard of instruction falls.

The only way that I can see of improving, with our present force, our already rich and varied instruction is through increased stress on offering what should be taught rather than what the teachers wish to teach. I say this with hesitation, because I understand the value of the teacher's freedom which has helped to give Harvard University its distinction and has drawn to it many of its best teachers; because also there is already in every Department a distinct effort to teach what should be taught. It is said, for instance, that in every subject one course at least should deal, not with minutiae, but with those larger matters which for persons who are not to be specialists in that subject are most interesting and valuable; that in every subject there should be at least one so-called "culture course." Hard as it is to keep up the standard of work in such courses, I believe there should be more of them than there are. But the experts in the various Departments nearly always maintain that the Departments amply provide them now.

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Large elementary courses, if not so large as to be unwieldy, are admirable introductions not only to great subjects of study, but to the strongest teachers, — the men whose influence is widest and best. Many graduates who are by no means scientific have received their most lasting stimulus from a course conducted years ago by Professor James in which he discussed the greater movements of modern scientific thought. Some of the best teachers in the country have conducted, and still conduct, courses for our younger students with mutual benefit. No better scheme has yet been devised than that of the Division of Mathematics, wherein every teacher of Faculty rank has work with younger students and other work with older ones — a scheme helpful to students and teachers alike. We need to show all our best teachers, not merely some of them, that Freshmen are as important and as interesting as candidates for the Doctor's degree.

Scrutiny of the Elective Pamphlet detects few courses, if any, which the Departments offering them cannot ably defend. Some men overvalue their own Departments and undervalue other peoples'; there are few teachers whose instruction somebody will not pronounce worthless or worse: yet from a catholic point of view what we need is not fewer teachers, but more, — teachers to fill gaps which a study of the Elective Pamphlet reveals. In a subject of universal recognition, History, we need to be strengthened on the ancient side and on the modern. Greek History, Roman History, Roman Law, the development of the East to-day, the development of South America to-day, — these are subjects for which we need additional teachers. In Chemistry we need to be strengthened on the industrial side. Similar needs may be discovered in other Departments; so difficult is it for a university to meet the complicated demands of modern intellectual life.

L. B. R. BRIGGS, *Dean*.

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# THE COLLEGE.

To the President of the University: —

Sir, — I have the honor to present to you a report on Harvard College for the academic year 1906–07.

The total number of students in the College at the time when the lists were compiled for the Catalogue of 1906–07 was two thousand two hundred and forty-seven, divided as follows: —

| | |
|---|---|
| Seniors | 328 |
| Juniors | 418 |
| Sophomores | 633 |
| Freshmen | 605 |
| Total number of Undergraduates | 1984 |
| Special Students | 263 |
| Total | 2247 |

These figures, compared with those at the corresponding time in 1905–06, show a gain of three hundred and forty-eight: —

| | Gain. |
|---|---|
| Seniors | 86 |
| Juniors | 1 |
| Sophomores | 32 |
| Freshmen | 117 |
| Special Students | 112 |
| Net gain | 348 |

This great gain, as was pointed out in the Catalogue for the year, was due not to a sudden increase in the number coming from the class from which the College is habitually recruited, but to the establishment of the degree of Bachelor of Science in Harvard College, which led to the registration in the College of about three hundred students who formerly would have registered in the Scientific School.

During the year the following students died: —

| | |
|---|---|
| John Phillips Bigelow, '09, | April 25, 1907. |
| Curtis Parker, '09, | July 3, 1907. |
| Edward Rawson, Jr., '09, | March 27, 1907. |

Four hundred and forty-eight students — thirteen in March and four hundred and thirty-five in June — received the degree of Bachelor of Arts in course. (Compared with the figures of the preceding year, these show an increase of sixty-five.) Of these, two hundred and sixty-eight (including nine who were recommended for

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the degree in March) were registered in the Senior Class. The registration of the others is shown in the next table: —

| | |
|---|---|
| On leave of absence all the year | 30 |
| On leave of absence first half-year | 0 |
| On leave of absence second half-year | 27 |
| Graduate Students in Arts and Sciences | 13 |
| Graduate Students in Applied Science | 6 |
| Registered in the Law School | 20 |
| Registered in the Medical School | 10 |
| Registered in the Scientific School | 2 |
| Special Students | 1 |
| Registered in the Sophomore Class | 15 |
| Registered in the Junior Class | 7 |
| | 131 |
| To be designated "as of 1908" in the *Quinquennial* | 49 |
| | 180 |

Twenty-six students — one in March, and twenty-five (one of whom will appear in the Quinquennial Catalogue as a member of the Class of 1908) in June — received the newly established degree of Bachelor of Science. The registration of these students was as follows: —

| | |
|---|---|
| Senior Class | 18 |
| In Graduate School of Applied Science | 2 |
| On leave of absence for second half-year | 1 |
| Junior Class | 2 |
| Sophomore Class | 2 |
| Special Students | 1 |
| | 26 |

Of the twenty-six students who received the new degree, twenty-two had been regularly registered in the Scientific School and were transferred to Harvard College at the beginning of the academic year when the new degree was established; one had been at one time registered in the Scientific School but had been transferred to Harvard College as a candidate for the degree of Bachelor of Arts before the establishment of the new degree; two had never been registered in the Scientific School.

The next tables show the losses and gains in the three younger classes between November, 1906, and November, 1907: —

| | November, 1906. | | Loss. | Gain. | November, 1907. | |
|---|---|---|---|---|---|---|
| Class of 1908 . . | (Juniors) | 416 | 207 | 83 | (Seniors) | 292 |
| Class of 1909 . . | (Sophomores) | 635 | 253 | 88 | (Juniors) | 470 |
| Class of 1910 . . | (Freshmen) | 605 | 117 | 189 | (Sophomores) | 677 |
| | | | 577 | 360 | | |

Net loss in the three classes between Nov., 1906, and Nov., 1907, 217 (92 more than in 1906).

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[The discrepancy between the numbers of students in the classes as given in the foregoing table and the numbers as given in the Catalogues of the corresponding years is caused by the entrance or withdrawal of students between the time of the preparation of this table and the going to press of the Catalogue.]

| | Class of 1908. | Class of 1909. | Class of 1910. | Total for three classes. |
|---|---|---|---|---|
| LOSSES. | | | | |
| Left College before the end of the year . . | 10 | 25 | 34 | 69 |
| Left College at the end of the year . . . . | 161 | 51 | 13 | 225 |
| Were "dropped" and left College . . . . | 8 | 40 | 16 | 64 |
| Entered a lower class . . . . . | 13 | 85 | 35 | 133 |
| Entered a higher class . . . . . | 15 | 52 | 19 | 86 |
| Total loss . . . . . | 207 | 253 | 117 | 577 |
| GAINS. | | | | |
| From higher classes . . . . . | 2 | 13 | 85 | 100 |
| From lower classes . . . . . | 52 | 19 | . . | 71 |
| Newly admitted . . . . . | 29 | 56 | 104 | 189 |
| Total gain . . . . . | 83 | 88 | 189 | 360 |
| Net loss . . . . . | 124 | 165 | . . | 217 |
| Net gain . . . . . | . . | . . | 72 | . . |

The next table shows the losses and gains in the number of Special Students since December, 1906 : —

| | |
|---|---|
| In attendance, December, 1906 . . . . . | 263 |
| Left College before the end of the year . . . . . | 36 |
| Left College at the end of the year . . . . . | 71 |
| Entered a College class . . . . . | 74 |
| Total loss . . . . . | 181 |
| Reëntered College as Special Students in 1907 . . . | 82 |
| Newly admitted . . . . . | 152 |
| Total . . . . . | 234 |
| Net loss . . . . . | 29 |

The Freshman Class in 1907–08 numbers six hundred and seven, an increase of two over the class of the preceding year : —

| | |
|---|---|
| Admitted by examination in 1907 . . . . . | 506 |
| Admitted by examination before 1907 . . . . . | 33 |
| Admitted from another college . . . . . | 8 |
| From a higher class . . . . . | 47 |
| " the Special Students . . . . . | 11 |
| " the Lawrence Scientific School . . . . . | 2 |
| Total . . . . . | 607 |

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A comparison of this table with that of last year shows one important change, — the admission directly to the Freshman Class of students from another college, a notable departure from the practice of many years. The far-reaching effect of this revival of a method once in vogue, but subsequently abandoned, should be most carefully observed and studied by the Faculty.

For several years a table appearing annually in this report has shown a steady decrease in the number of the Senior Class. In 1906–07, however, the Senior Class showed a distinct increase: —

| 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|
| 1992 | 1983 | 2109 | 2073 | 2009 | 1899 | 2247 |
| 388 | 346 | 381 | 325 | 265 | 242 | 328 |

This increase of eighty-six in a single year, which might lead an observer at first glance to ask if a reaction toward a four-year degree had not set in, was without doubt sporadic, due, in part if not wholly, to the same causes that swelled the numbers in the College, — the transfer to the College, as candidates therein for A.B. or S.B., of students who formerly were registered in the Scientific School; for an inspection of the first table, that giving the losses and gains to November, 1907, shows that in the present year, 1907–08, when the College has practically the same number as last year, the decrease has again set in, and the Senior Class (1908) numbers but two hundred and ninety-two. An inspection of the records of these two hundred and ninety-two reveals the fact that seventeen had completed the requirements for their degrees at the end of last year, 1906–07, and that one hundred and thirty-one could have so arranged their courses as to complete the requirements at the middle of the present year: —

| | | | |
|---|---|---|---|
| Work complete . . . . . | 17 | Registered in a Graduate School: | |
| One half-course to do . . . | 12 | One half-course to do . . . | 5 |
| Two half-courses to do . . | 14 | Two half-courses to do . . | 3 |
| Three half-courses to do . . | 23 | | |
| Four half-courses to do . . | 19 | | |
| Five half-courses to do . . | 22 | | |
| Six half-courses to do . . . | 41 | | |
| | 148 | | |

Study of any tables that have thus far been prepared, to say nothing of the conclusions forced upon one much in contact with students, or of the establishment of the new Graduate School of Applied Science on the base of three years of undergraduate study, shows that the three-year degree is too firmly established to be shaken, and is gradually but steadily becoming the normal type.

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Since this is undeniable, a lover of sound learning cannot but deprecate the attack — probably unconscious — upon the quality of the work done in College for this degree made by a vote of the Faculty, May 7, 1907, first applicable to the Class of 1912: —

"That hereafter no extra admission subject be counted as a course or half-course towards a degree unless offered in advance as the equivalent of College work, and unless the examination book has been read with that end in view, and marked not lower than *C*."

The briefest examination of this vote is sufficient to disclose some of what I believe to be the evils it works, — the untrustworthy system of grading which it proposes; the unfortunate emphasis it lays upon marks, thereby discouraging capable schools from giving their better pupils the most liberal training, lest by forgetting some minutiae they should not secure the requisite grade; and the resulting insistence upon quantity, at the expense of quality, in the work of three and three-and-a-half-year men.

Entrance examinations are for but a single purpose, — to determine whether a student is fitted to carry on in College the work to which his training in school has been introductory — there is not, there cannot justly be, any other, and all admission examination books should be read with this single aim. Under this new system, however, a boy who offers only the twenty-six points for admission and passes, for example, Advanced French with a grade of *D*, receives credit therefor, but a second boy who offers twenty-eight points and passes the same examination with the same grade can receive no credit for it; both, however, are admitted to French 2, the course to which this training was introductory. Thus to give credit for work when it is offered for admission, and to deny credit when the work is in excess of the requirements (although in both cases a College course — French 1 — is anticipated), to adopt one system of grading in the one case and another in the second, when the real purpose of the work is the same, is to establish a double and therefore untrustworthy standard.

Again, boys taking examinations under the pressure of our present system in new, strange, and not infrequently confusing conditions, are liable to make a poor appearance. It is argued on the other side that some boys take examinations "just to see what they can do," — "that they run for luck," — but that this is done by a few is no disproof of the injustice of a double standard. Both boys should stand or fall by the result of their work in College. A new and more elaborate system of conditions is here imposed than that from which the Faculty has been trying to free itself.

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Still greater, however, is the evil of the five-and-a-half and six-course yearly rate, which this new rule forces upon the three or three-and-a-half-year men who fail to secure the requisite grade in examinations passed before they enter College. Experience in the College office can lead the most ardent supporter of the six-course or the absolutely free rate to but one conclusion, — that in ninety-nine cases out of a hundred the practice is bad, not only for the individual student, but also for the general standard of instruction; and even in the hundredth case of the student who does well in all of his six courses the individual would probably be better trained, more broadly educated, if he regularly elected fewer courses. This new rule but increases the already too great demand that "everything done in College shall count for the degree," a demand which has practically brought about abandonment of the excellent old practice of taking "extra courses," — that is, of a student's listening to lectures and receiving instruction without any thought of counting directly towards a degree what is thus gained.

The new system is cumbrous, and is not unlikely to break down from its own awkward weight: even when it was proposed, its advocates admitted that exceptions to the rule would have to be made, that candidates who had done well in subjects offered in satisfaction of the necessary admission points, and ill in those offered in excess, might be allowed to shift their choice of subjects to be counted for a degree; but the Faculty even now may well consider whether in the interests of real scholarship the system should not be at once abolished.

On the other hand, two other votes relating to admission requirements

"(*a*) That each student admitted with conditions shall be required to remove his conditions before he registers as a Sophomore."

"(*b*) That students admitted with conditions in *elective* work be permitted to remove those conditions by courses in subjects other than those in which admission examinations are held."

should work much good.

The Administrative Board for the year 1906–07 was made up of Professors Willson, Parker, Ward; Messrs. Hart and Lyman; Assistant Dean Wells, his successor, Assistant Dean Castle (from the time of his appointment), and the Dean. The experience of two years with a Board small in number and practically unchanged in personnel has proved the wisdom of the change in the statute which prescribed for Harvard College a larger Board. A small committee, each member of which feels his responsibility and makes himself

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familiar with every important detail of business, is the most effective administrative body. That the Board has, for the two years since it was reduced in size, been practically unchanged in membership, and that all except one of its members have had long experience upon it, has enabled it to institute and carry through a definite policy: it is now generally understood throughout the College that every student, unless the case be exceptional, to be in good standing (a phrase usually interpreted by undergraduates to mean eligible to take part in public performances and contests) must maintain steadily throughout the year such a record as would, were it final, entitle him to promotion to a higher class.

During the year one student was suspended for handing in as his own work a thesis copied from a book; nineteen students had their probation closed for neglect of work, and two (Freshmen) for cheating; one Special Student, admitted on trial, was sent away on account of an unsatisfactory record.

The effect of the amendment of the rule concerning probation, that a student on probation whose record at the end of the year does not warrant his restoration to good standing shall ordinarily have his probation closed, is salutary. The usual cause for the closing of probation at the end of the year is the student's failure to win his promotion, for any student on probation who has been faithful in his attendance and who by his final grades wins his promotion to the next class is by understanding of the Board at once told that he will be relieved from probation and given a clean start for the next year. On the other hand, a student on probation who, at the end of the year, has failed to win his promotion is told (unless the case be exceptional) that under the rules his connection with the College is severed, but, also, if the case is not practically hopeless, that he may hope to secure readmission if at the beginning of the next academic year he brings evidence of some satisfactory work accomplished in the interval, and can assure the Board that, if he is readmitted, he will devote himself first of all to his studies. The evidence upon which the Board acts usually consists of satisfactory work in the Summer School which may be counted toward the degree, but testimonials from business employers are also accepted. As evidence of the salutary effect of the working of this rule may be cited the case of nineteen Freshmen who were told that their connection with the College was severed, and that they could be readmitted only by a special vote of the Board. Of these, sixteen presented evidence of satisfactory work and were allowed to return at the beginning of the present academic year.

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In May, Mr. Edgar Wells, who had served since the beginning of the academic year 1905-06 as Assistant Dean, resigned that position to become General Secretary of the Alumni Association, generously agreeing, however, — in fact stipulating, — that he should continue until the end of the year to serve his successor as adviser in difficult cases already before the Board, and as a member of the Administrative Board. Valuable as are his services to the University and to Harvard men in his new and wider field, and although he will still, by his work on the Appointments Committee, be brought into contact with a large number of undergraduates, it is, nevertheless, greatly to be regretted that the College administration loses an officer of such tact, kindness, wise patience, and unceasing devotion.

One important question of routine demands the attention of the Faculty. In order that its work may be effective the Board must act promptly, but such action can be secured only with the coöperation of every instructor. For many years the Board has been hampered by the failure of teachers to return grades at the times appointed by the Faculty. Annoying and impeding as are such delays when provisional grades are called for at November, the Mid-years, and April, they are still more serious when recommendations for degrees are to be made. Never has the situation been worse than it was at Commencement, 1907. In order to reduce as much as possible the great pressure of work inevitable at that time the administrative officers had by extra work in advance so prepared the business of the Board, that, had all grades been returned at the appointed time, the Board might have voted its recommendations Thursday night before Class Day, and thus have relieved the pressure upon the Saturday following Class Day when the Faculty regularly meets to make its recommendations. Delayed returns, however, made the work of the administrative officers practically valueless. At the appointed time, forty-two returns were lacking; some of these were not received until after the Board had met.

In the return of other final grades laxity has greatly increased. According to the rule of the Faculty, all final grades must be sent to the Recorder at latest by two weeks from Commencement Day. In 1907, one thousand one hundred and nine grades were lacking at that time, and even after the final sheets had been received at the office there were, according to the Recorder's report, no less than "twenty courses in which the grades of twenty-two men were returned as provisional or incomplete, and the grades of two men without any indication whatever except a dash." "There were," the Recorder continues in his letter, "four courses in which the returns of twenty-

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two men were marked 'no thesis.' There were seven courses in which the grades of twelve men were reported (sic) without any indication whatever except a dash. In nearly every case these omissions necessitated the writing of a letter to the instructor and a special letter to the parent of the student concerned. I am aware that the failure to return the proper grades on the part of the instructors concerned with these men, was due largely to the negligence of the boys. I think, however, that there ought to be some specified date at which the work of the course is to be finished, and that no extensions should be given after that time."

This recommendation of the Recorder that a time be fixed, after which an instructor shall not on his own responsibility receive delayed work, should be adopted by the Faculty. (It should be noted that the cases enumerated by the Recorder do not include those of students prevented by sickness or other unavoidable hindrance from completing the work of a course. All such cases are known to the Recorder and are dealt with by him.) The hindrance to the work of the Recorder's and the Dean's offices, and the just indignation of some parents and guardians at the late date at which they receive the reports for the year need no comment. Indeed, in view of the important part work in the Summer School is taking in the cases of students making up deficiencies or completing the requirements for their degrees in advance of their classmates, the Faculty may well consider not only the best method of enforcing the present rule, but also whether it should not amend the rule by fixing an earlier date, — for example, one week from Commencement Day, or better, the end of Commencement Week itself, as the last day for returning final grades.

The number of scholars winning a position in the First Group for the academic year 1907–08 is thirty-eight; of these eleven hold honorary and twenty-seven stipendiary scholarships. In 1906–07 forty-eight students won a position in this group; eight held honorary (one of the eight was by an error awarded a scholarship in the Second Group) and forty stipendiary scholarships.

Two hundred and twenty students in 1907–08 hold scholarships in the Second Group, — eighty-seven stipendiary, one hundred and thirty-three honorary, — as compared with one hundred and fifty-eight honorary and seventy stipendiary, in 1906–07.

Commencement, 1907, saw the end of the old system of bestowing degrees with distinction; a degree with high distinction can no longer be won by a mere heterogeneous collection of grades; hereafter such a degree will be given only on recommendation of a Division, a

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Department, or a special committee appointed for the purpose. The new system marks a most significant change in the attitude of the Faculty towards scholarship: the registration of candidates for the new degree seems to indicate on the part of a larger number of undergraduates than heretofore an increasing interest in real learning.

B. S. HURLBUT, *Dean.*

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# THE LAWRENCE SCIENTIFIC SCHOOL.

To the President of the University: —

Sir, — I have the honor to submit to you the following report on the Lawrence Scientific School and the Graduate School of Applied Science for the academic year 1906–07.

In March of the academic year 1905–06, a plan was adopted for the reorganization of the work in applied science in the University. This plan went into effect at the beginning of the year 1906–07. In brief, the reorganization established a Graduate School of Applied Science, and in the College the degree of Bachelor of Science, with the expectation that the College would thus receive a large number of students heretofore enrolled in the Lawrence Scientific School, and that the Graduate School of Applied Science would, in time, give the major part of the instruction heretofore given in the Lawrence Scientific School. Interest for the year centres in the manner in which this transition was accomplished, — in the initial enrolment of the Graduate School, in the proportion of Scientific School students to whom registration in the College was welcome, and in the gain or loss to the University as a whole as a result of the reorganization.

The initial enrolment and distribution of students in the Graduate School of Applied Science are shown in the following table: —

ENROLMENT IN THE GRADUATE SCHOOL OF APPLIED SCIENCE.

| | 1906–07. | | 1906–07. |
|---|---|---|---|
| Civil Engineering | 7 | Forestry | 5 |
| Mechanical Engineering | 0 | Applied Physics | 0 |
| Electrical Engineering | 2 | Applied Chemistry | 1 |
| Mining and Metallurgy | 8 | Applied Zoölogy | 0 |
| Architecture | 7 | Applied Geology | 0 |
| Landscape Architecture | 4 | Total | 29 |

The above table gives the enrolment in the Graduate School of Applied Science at the time at which the Catalogue for the year went to press. During the remainder of the year, seven more students registered in the school, their distribution being as follows: —

| | | | |
|---|---|---|---|
| Mining and Metallurgy | 2 | Chemistry | 1 |
| Mining | 1 | Zoölogy | 1 |
| Architecture | 2 | | |

The total enrolment in the School for the year was 36.

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The numerical change in the Lawrence Scientific School, as the result of the reorganization, is shown in the following tables: —

REGISTRATION BY CLASSES IN THE LAWRENCE SCIENTIFIC SCHOOL.

| Class. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|
| Fifth-Year | 1 | 6 | 0 |
| Fourth-Year | 92 | 68 | 56 |
| Third-Year | 66 | 73 | 35 |
| Second-Year | 138 | 131 | 68 |
| First-Year | 105 | 95 | 45 |
| Specials | 128 | 136 | 0 |
| Totals | 530 | 504 | 204 |

In the above table, some of the figures may be somewhat misleading. It might be inferred from the figures that all four classes are approximately the same size, that the entering is about as large as the graduating class, and that the Lawrence Scientific School may continue without further reduction in numbers. The distribution by classes does not, however, indicate in every case the length of residence. Of the 45 students indicated in that table as first-year students, 18 were not in their first year of residence, but were in their second, third, or even fourth year, retaining their registration in the first year either because of admission conditions or of failure in first-year subjects. In the year 1906–07 there were but 27 new students in the first-year class.

DISTRIBUTION OF STUDENTS IN THE FOUR-YEAR PROGRAMMES IN THE LAWRENCE SCIENTIFIC SCHOOL.

| Programme. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|
| Civil Engineering | 68 | 55 | 34 |
| Mechanical Engineering | 57 | 66 | 37 |
| Electrical Engineering | 84 | 83 | 42 |
| Mining and Metallurgy | 67 | 68 | 20 |
| Architecture | 44 | 46 | 15 |
| Landscape Architecture | 15 | 17 | 6 |
| Forestry | 8 | 13 | 8 |
| Chemistry | 24 | 29 | 11 |
| Geology | 5 | 8 | 3 |
| Biology | 11 | 5 | 1 |
| Anatomy and Physiology | 26 | 24 | 9 |
| Teachers of Science | 23 | 24 | 12 |
| General Science | 98 | 66 | 6 |
| Totals | 530 | 504 | 204 |

The first two columns in the above table are taken from the similar tables in the Dean's reports for previous years. In the preparation of such tables it was the custom to distribute the special students

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throughout the several programmes. Inasmuch as the special students have been transferred to the College, the third column in the table is hardly comparable directly with the others. In order to make the comparison between the enrolment of this year and that of previous years, it is necessary to prepare the first and second columns so as to include only regular students. This being done, the table appears as follows: —

DISTRIBUTION OF REGULAR STUDENTS IN THE FOUR-YEAR PROGRAMMES IN THE LAWRENCE SCIENTIFIC SCHOOL.

| Programme. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|
| Civil Engineering | 54 | 39 | 34 |
| Mechanical Engineering | 45 | 51 | 37 |
| Electrical Engineering | 62 | 66 | 42 |
| Mining and Metallurgy | 50 | 49 | 20 |
| Architecture | 29 | 29 | 15 |
| Landscape Architecture | 9 | 9 | 6 |
| Forestry | 6 | 8 | 8 |
| Chemistry | 17 | 19 | 11 |
| Geology | 1 | 2 | 3 |
| Biology | 4 | 2 | 1 |
| Anatomy and Physiology | 19 | 18 | 9 |
| Teachers of Science | 15 | 13 | 12 |
| General Science | 91 | 63 | 6 |
| Totals | 402 | 368 | 204 |

The greatest change, as was to be expected, was in the programme in General Science. The new S.B. degree in Harvard College removed all reason for the existence of such a group of students in the Lawrence Scientific School. Of the 66 students in General Science in the Lawrence Scientific School in the year 1905–06, 3 were special students. Of the 3, 2 did not return to the University, and 1 transferred his registration to the College. Thirteen of the students in General Science, in regular standing, graduated; 21 did not return to the University; 20 were transferred to the College, becoming candidates for the degree of Bachelor of Science; 3 were transferred to the College as candidates for the degree of Bachelor of Arts. The 6 who returned to the University, but did not transfer themselves to the College, did not do so because unable to obtain a favorable rating.

In two respects, the College requirements are more severe than the requirements of the Lawrence Scientific School. The College requires that two-thirds of the courses offered by a student in satisfaction of the requirements for a degree shall be passed with the grade of C or better; the Lawrence Scientific School requires that

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but half of the courses shall be passed with the grade of C or better. It has also been the custom in the Lawrence Scientific School to permit courses to count both toward the degree and toward the removal of the corresponding admission conditions, even when passed with a grade of D. In the College, only courses more advanced than the admission subjects, and only when passed with a grade of C or better, can at the same time count toward the degree and remove an admission condition. For some students these differences constitute strong inducements for continued registration in the Lawrence Scientific School, inducements of a sort not contemplated in the trial that is now being given the reorganization.

Early in the year, on recommendation of the Faculty, the Corporation voted to withdraw the programme in General Science and the programme in Anatomy and Physiology, except for students already registered in them.

It is interesting to determine whether this reorganization of the technical work in the University resulted in a net gain or loss in students to the University. To determine this the following figures show for three years the number of students enrolled in the Lawrence Scientific School one year who failed to register in the University, in any of its departments, the following year: —

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| In L. S. S. in | 1903–04 | but not in | University in | 1904–05 | . . . . . | | 181 |
| " " | 1904–05 | " " | " | 1905–06 | . . . . . | | 205 |
| " " | 1905–06 | " " | " | 1906–07 | . . . . . | | 172 |

It appears from this that if the reorganization had any effect, it was toward retaining in the University the students who were in the School.

The following figures in regard to special students may also be of interest in this connection: —

| | |
|---|---|
| Special students in Harvard College, 1905–06 . . . . . | 151 |
| Special students in Lawrence Scientific School, 1905–06 . . . . | 136 |
| Total . . . . . | 287 |
| Special students in Harvard College, 1906–07 . . . . . | 263 |

The following figures are in regard to the new S.B. degree in Harvard College: —

| | |
|---|---|
| Regular students candidates for the S.B. degree in Harvard College without designation of field . . . . . | 119 |
| Of these by transfer from Lawrence Scientific School . . . . . | 72 |
| New candidates for the S.B. degree in Harvard College . . . . . | 47 |

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The following figures are in regard to students, candidates in their *first* year for the S.B. degree (with and without designation of field):—

| | |
|---|---|
| Lawrence Scientific School | 45 |
| Harvard College | 42 |
| Total, 1906–07 | 87 |
| Total, 1905–06 | 95 |

The difference between the number of first-year students for the S.B. degree in the year 1905–06 and 1906–07, the difference of eight, is more than accounted for by the number who have in previous years offered Elementary Latin in satisfaction of the requirements for admission to the Lawrence Scientific School. For example, the numbers of students offering Latin for admission to the Lawrence Scientific School in the three years just preceding are as follows: 38, 33, and 24, in the years 1903–04, 1904–05, and 1905–06, respectively. Bearing on this difference, there is also the fact that of the students in the Lawrence Scientific School who transferred to Harvard College at the beginning of the year, 33 transferred as candidates for the degree of A.B., making the average transfer per class 11.

Finally, for the first time for four years, the combined undergraduate departments showed a gain in the number of students registered, a gain of 48.

The students enrolled in the Lawrence Scientific School, in the academic year 1905–06, were, at the time of the issue of the Catalogue in the year 1906–07, distributed as follows:—

| | | | |
|---|---|---|---|
| Remained in the Lawrence Scientific School | | | 160 |
| Graduated and did not return to the University | | | 58 |
| Number who did not receive degrees, but who did not return to the University (Probation closed, 8; Deceased, 2) | | | 114 |
| Transferred to Harvard College | Regular 105 | A.B. 33 | |
| | | S.B. 72 | |
| | Special 50 | | 155 |
| Returned to Graduate School of Applied Science | | | 9 |
| Returned to Graduate School of Arts and Sciences | | | 3 |
| Returned to Harvard Medical School | | | 4 |
| Returned to the Bussey Institution | | | 1 |
| Total | | | 504 |

The number of students in the Lawrence Scientific School in the year 1904–05 who did not receive degrees, but who did not return to the University in the year 1905–06, was 131.

The above figures were those existing at the time at which the Catalogue went to press. Before the end of the year 8 more students transferred to Harvard College.

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The above tables show that from almost any point of view there was no net loss in the University by the reorganization.

During the year 1906–07 the degree of Bachelor of Science was conferred in the following fields in the Lawrence Scientific School: —

| | | | |
|---|---|---|---|
| Civil Engineering | 10 | Forestry | 2 |
| Mechanical Engineering | 13 | Chemistry | 3 |
| Electrical Engineering | 9 | Geology | 1 |
| Mining and Metallurgy | 2 | Anatomy and Physiology | 4 |
| Architecture | 5 | Science for Teachers | 1 |
| Landscape Architecture | 1 | General Science | 2 |
| Total | | | 53 |

In the Graduate School of Applied Science, the following degrees were conferred: —

| | |
|---|---|
| Master in Civil Engineering | 2 |
| Mining Engineer | 1 |
| Master in Architecture | 2 |
| Master in Landscape Architecture | 1 |
| Master in Forestry | 2 |
| Total | 8 |

At the present time the work in engineering is in great need of financial support. The large number of students taking these subjects tax to the utmost the capacity of the laboratory facilities and the strength and time of the instructing staff. The fact that the subjects of civil, mechanical, and electrical engineering are pursued by a large number of students in the technical schools throughout the country and the fact that the majority of the inquiries received are in regard to engineering indicate that an increase in the material resources for instruction in these subjects and in the staff of instructors would be a particularly wise investment from the standpoint of increasing attendance. Engineering subjects are generally regarded as typical of the work of a school in applied science, and the support they receive and the manner in which they are handled go far to establish its standing.

WALLACE C. SABINE, *Dean.*

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# ATHLETIC SPORTS.

To the President of the University: —

Sir, — I have the honor to submit to you a report for the academic year 1906–07 on the work of the Committee on the Regulation of Athletic Sports.

## I. Organization.

The Joint Committee of the Corporation and Overseers appointed in May, 1906, to consider and report on the whole subject of the regulation of Athletic Sports, presented its conclusions in February, 1907; and in March, 1907, the recommendations of the joint committee were adopted and some changes were made in the organization of the Athletic Committee. Owing to the uncertainty which prevailed regarding the outcome of the above inquiry, the Athletic Committee was unable to continue the development of the plans which it had been considering for the betterment of athletics, and confined its attention chiefly to a policy of temporary administration.

## II. Equipment.

For the above reason the work of the improvement of Soldier's Field has been arrested, with the exception of some unavoidable repairs to the base-ball stands, and the laying out of sixteen tennis courts rendered necessary by loss of courts arising from the erection of the law school building on Holmes Field. As the Committee is now instructed to apply the entire surplus of athletic receipts, beyond the sums needed for current athletic expenses, to the extinguishment of the debt on the Stadium until that is paid, while the further development of the Field is to be "gradual," it is likely that legitimate intramural college athletics will continue to be greatly hampered, unless some new and generous donor should arise and complete the task so liberally begun.

To illustrate: Among the college games cricket is conducted on an entirely amateur basis. By the constitution of the cricket league, even the collection of gate money has been prohibited. The Cricket Team was obliged to disband this year because the new tennis courts encroached on the cricket territory, while no fresh land had been

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reclaimed to provide for the latter sport, and no funds were available to secure grounds elsewhere. Owing to the same lack of playing territory, the Leiter Cup base-ball series was given up for the Spring term. This series of impromptu matches bears the same relation to base-ball as the dormitory races to rowing, namely, it affords to students of only average prowess a pleasant and healthful opportunity for informal exercise and competition. To provide and enlarge opportunities for such informal and local sport has been one of the leading aims of the Committee. It would be unfortunate if this aim should be thwarted by a policy of delay and deliberation in the utilization of Soldier's Field, much of the splendid expanse of which is at present absolutely useless.

In the Locker Building a room has been set aside for the use of the Track Team, similar to the crew room in the University boat-house. The funds for furnishing were raised outside. Attractive plans for a new base-ball stand, to be composed of brick, concrete, and steel, have been submitted by Professor H. J. Hughes. This sightly and useful structure will cost about $100,000 and awaits its donor. Meanwhile the present iron and wooden framework is annually patched, and not too efficiently protected from fire by Babcock hand extinguishers and a chemical engine.

The new Weld boat-house described in my last report has been completed, and is to be formally opened at the beginning of the academic year 1907–08.

## III. Finances.

The actual cost of the Stadium proper to date has been a little under $300,000 (see President's Report, 1905–06, p. 121).

On July 1, 1907, a payment of $20,000 was made on the debt, which with the interest amounted on August 1, 1907, to $31,015.25.

The tables which follow form a continuation of those published in the Report for 1905–06 (pp. 122–125).

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## HARVARD ATHLETIC ACCOUNTS.

### Receipts.

| | 1903-04. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|---|
| Freshman Foot-Ball . . . | $1,143.67 | $1,301.75 | $1,148.75 | $1,395.35 |
| Freshman Base-Ball . . . | 892.40 | 1,289.85 | 1,208.98 | 1,120.91 |
| Freshman Crew . . . . . | 2,224.10 | 2,107.89 | 1,927.38 | 1,575.25 |
| Athletic Assoc'n, Track Team | 5,968.63 | 4,986.31 | 6,721.26 | 4,150.76 |
| Foot-Ball Association . . . | 72,569.81 | 68,657.10 | 85,335.66 | 64,950.14 |
| Base-Ball Association . . . | 16,674.08 | 16,952.56 | 15,893.28 | 18,506.89 |
| Lawn Tennis Association . | 154.50 | 151.50 | 202.50 | 236.25 |
| Cricket Club . . . . . | 155.25 | 317.00 | ..... | ..... |
| Boat Club . . . . . | 3,375.75 | 3,354.60 | 2,926.00 | 2,962.65 |
| Lacrosse Association. . . . | 562.47 | 835.05 | 589.50 | 246.45 |
| Second Nine, College Nine . | 273.04 | 171.50 | ..... | 184.00 |
| Weld Boat Club . . . . . | 850.50 | 924.00 | 835.00 | 842.00 |
| Newell Boat Club . . . . . | 1,096.30 | 954.55 | 1,301.00 | 1,418.00 |
| Freshman Basket-Ball . . . | 174.90 | 130.00 | 75.78 | 145.50 |
| Basket-Ball Team . . . . | 600.70 | 980.25 | 1,326.25 | 1,414.47 |
| Hockey Club . . . . . | 1,088.90 | 1,483.00 | 1,629.64 | 2,901.72 |
| Fencing Team . . . . . | 143.48 | 83.40 | 317.77 | 435.57 |
| Lawn Tennis Courts . . . | 2,618.60 | 3,169.90 | 3,560.14 | 3,272.70 |
| Gymnastic Team . . . . . | 127.00 | ..... | ..... | ..... |
| Freshman Hockey. . . . . | 151.05 | 47.85 | 8.50 | ..... |
| Jiu Jitsu . . . . . | ..... | 57.50 | ..... | ..... |
| Hand-Ball . . . . . | ..... | 2.64 | ..... | ..... |
| Second Basket-Ball . . . . | ..... | 94.92 | ..... | 102.40 |
| Freshman Lacrosse . . . . | ..... | 18.50 | ..... | 116.84 |
| Association Foot-Ball . . . | ..... | ..... | 95.25 | 83.65 |
| Swimming Team . . . . . | ..... | ..... | 131.07 | 63.60 |
| | 110,845.13 | 108,071.62 | 125,233.71 | 106,125.10 |

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## HARVARD ATHLETIC ACCOUNTS.

### Expenses.

| | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|
| Freshman Foot-Ball . . . | $830.58 | $1,329.36 | $1,259.79 | $1,689.32 |
| Freshman Base-Ball . . . | 851.84 | 1,314.25 | 1,049.95 | 905.25 |
| Freshman Crew . . . . . | 3,092.46 | 2,621.57 | 2,617.05 | 2,609.69 |
| Athletic Assoc'n, Track Team | 6,522.25 | 6,625.46 | 7,065.32 | 8,325.11 |
| Foot-Ball Association . . . | 15,346.51 | 17,424.78 | 29,627.87 | 24,216.50 |
| Base-Ball Association . . . | 12,638.89 | 11,564.36 | 10,356.19 | 10,161.37 |
| Lawn Tennis Association . | 274.76 | 179.75 | 292.01 | 441.17 |
| Cricket Club . . . . . | 479.28 | 431.46 | ..... | ..... |
| Boat Club . . . . . | 9,857.47 | 10,147.97 | 11,266.51 | 10,356.06 |
| Lacrosse Association. . . . | 1,109.97 | 1,205.81 | 803.29 | 567.90 |
| Freshman Lacrosse Assoc'n | ..... | ..... | 75.00 | ..... |
| Second Nine, College Nine . | 347.41 | 307.01 | 167.72 | 379.41 |
| Weld Boat Club . . . . . | 2,739.92 | 2,618.12 | 4,165.97 | 2,841.91 |
| Newell Boat Club . . . . | 2,502.89 | 2,800.29 | 1,889.32 | 2,572.67 |
| Freshman Basket Ball . . . | 150.95 | 137.65 | 75.78 | 131.77 |
| Basket-Ball Team . . . . | 818.53 | 1,029.55 | 1,480.69 | 1,643.04 |
| Hockey Club . . . . . | 1,310.99 | 1,463.14 | 1,698.61 | 2,171.69 |
| Fencing Team . . . . . | 644.11 | 82.00 | 421.66 | 435.57 |
| Lawn Tennis Courts . . . | 1,485.81 | 1,791.27 | 2,160.04 | 1,768.07 |
| Gymnastic Team . . . . . | 183.08 | 34.00 | ..... | 51.24 |
| Freshman Hockey. . . . . | 151.05 | 46.85 | 29.00 | ..... |
| Jiu Jitsu . . . . . | ..... | 167.50 | ..... | ..... |
| Hand-Ball . . . . . | ..... | 52.64 | ..... | ..... |
| Second Basket-Ball . . . . | ..... | 66.69 | ..... | 110.80 |
| Freshman Lacrosse . . . . | ..... | ..... | ..... | 50.00 |
| Association Foot-Ball . . . | ..... | 45.64 | 85.50 | 193.10 |
| Swimming Team . . . . . | ..... | ..... | 103.62 | 92.50 |
| | 61,338.55 | 63,487.12 | 76,690.89 | 71,714.14 |

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## HARVARD ATHLETIC ACCOUNTS.

SUBSCRIPTIONS.

| | 1903-04. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|---|
| Freshman Foot-Ball . . . | $928.20 | $1,019.25 | $1,025.25 | $1,133.10 |
| Freshman Base-Ball . . . | 633.81 | 894.15 | 981.84 | 835.75 |
| Freshman Crew . . . . . | 2,224.10 | 2,107.89 | 1,927.38 | 1,575.25 |
| Athletic Assoc'n, Track Team | 2,019.61 | 1,697.00 | 1,947.75 | 1,873.80 |
| Foot-Ball Association . . . | ..... | ..... | ..... | ..... |
| Base-Ball Association . . . | ..... | ..... | ..... | ..... |
| Lawn Tennis Association . | ..... | ..... | ..... | ..... |
| Cricket Club . . . . . | 155.25 | 317.00 | ..... | ..... |
| Boat Club . . . . . | 1,623.75 | 2,028.60 | 1,052.00 | 681.50 |
| Lacrosse Association. . . . | 349.47 | 312.00 | 158.40 | 146.45 |
| Freshman Basket-Ball . . . | 138.25 | 130.00 | 75.78 | 21.50 |
| Basket-Ball Team . . . . | 262.50 | 473.25 | 943.50 | 289.50 |
| Hockey Club . . . . . | 492.50 | 889.50 | 934.65 | 1,895.08 |
| Fencing Team . . . . . | 110.50 | 62.50 | 287.77 | 435.57 |
| Freshman Hockey. . . . . | 151.05 | 47.85 | 8.50 | ..... |
| Jiu Jitsu . . . . . | ..... | 57.50 | ..... | ..... |
| Hand-Ball . . . . . | ..... | 2.64 | ..... | ..... |
| Freshman Lacrosse . . . . | ..... | 18.50 | ..... | 116.84 |
| Association Foot-Ball . . . | ..... | ..... | 62.00 | 73.00 |
| Swimming Team . . . . . | ..... | ..... | 131.07 | 38.60 |
| | 9,088.99 | 10,057.63 | 9,535.89 | 9,115.94 |

## HARVARD ATHLETIC ACCOUNTS.

TRAINING TABLES.

| | 1903-04. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|---|
| Freshman Foot-Ball . . . | $143.95 | $195.97 | $312.31 | $234.28 |
| Freshman Base-Ball . . . | 229.60 | 337.69 | 245.72 | 130.15 |
| Freshman Crew . . . . . | 16.49 | ..... | 58.76 | ..... |
| Athletic Assoc'n, Track Team | 1,235.12 | 904.34 | 1,203.34 | 994.20 |
| Foot-Ball Association . . . | 2,474.89 | 2,101.08 | 4,096.39 | 2,626.48 |
| Base-Ball Association . . . | 2,026.81 | 1,882.86 | 1,176.87 | 753.85 |
| Boat Club . . . . . | 1,128.00 | 1,134.07 | 614.60 | 882.53 |
| Lacrosse Association. . . . | 191.10 | 183.42 | ..... | ..... |
| College Nine . . . . . | ..... | 94.60 | ..... | ..... |
| Basket-Ball Team . . . . | 101.50 | ..... | ..... | 219.53 |
| Hockey Club . . . . . | 203.12 | 267.88 | 332.07 | 444.40 |
| | 7,750.58 | 7,101.91 | 8,040.06 | 6,285.42 |

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These tables exhibit some variations in expenditure. The foot-ball budget, which was $17,424.78 in 1904, rose to $29,627.87 in 1905, and receded in 1906 to $24,216.50. It is expected that the season of 1907 will show a still further reduction.

## IV. Branches of Athletics.

The branches of athletics under the direction of the Committee remain essentially the same as last year. Those organizations whose participation in intercollegiate contests during the current year entitled each to an elector for choosing the three undergraduate members of the Athletic Committee were: Association foot-ball, base-ball, basket-ball, fencing, foot-ball, golf, the Gun Club, gymnastics, hockey, lacrosse, rowing, swimming, tennis, and track athletics. The branches not so entitled were cricket, hand-ball, and the Rifle and Pistol Club.

The sport of polo has recently been taken up by some Harvard students, but no formal organization has yet been made. In rowing the plan of dormitory races was satisfactorily continued, and an increased number of crews took part. The experiment of a professional coach for the University squad was continued for a third season with reasonably acceptable results, considering the unavoidable mishaps of the season. It may be remarked that Harvard is not at present committed to this method of coaching beyond the annual decision of the Committee and the crew management.

In base-ball strong pressure was brought to bear upon the Committee to sanction the employment of a professional player as coach with full charge of the team. The principal argument appeared to be that Harvard's chief opponent had adopted this system. The request was twice denied by a close vote. The base-ball management cheerfully accepted the decision and secured a Harvard graduate as head coach, who was paid a small sum for his loss of time in the law office with which he was connected. To some this arrangement may seem to savor quite as much of professionalism as the one denied. As a result, the nine, although composed of young material, won its chief series, and, what was far more important, its *morale* was admirable.

The interest in track athletics continued strong. The team won its chief event; and also the Stadium was again the scene of a remarkable and successful general intercollegiate meet.

By vote of the Corporation and Overseers (May 7 and 9, 1906; see also President's Report for 1905–06, pp. 126–128) the Athletic Com-

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mittee was "authorized to permit, during the year of 1906, but not later than December 1, 1906, games of intercollegiate foot-ball under the new rules, upon such terms and conditions as said Committee on the Regulation of Athletic Sports shall consider advisable in order to test the expediency of continuing intercollegiate foot-ball"; and the following vote was also adopted by the Board of Overseers: "That in the opinion of this Board many of the unsatisfactory conditions attending intercollegiate foot-ball have been exaggerated by an unwillingness on the part of the officials charged with the enforcement of the rules on the field to assert their authority, and therefore this Board requests the Committee on the Regulation of Athletic Sports to formulate, if possible, some more satisfactory plan for the election of such officials than the one now in vogue."

These votes placed a burdensome responsibility upon the Committee, as a close supervision of the whole foot-ball season was implied. This duty the Committee endeavored to fulfil. The appointments of officials were submitted for its approval, and the practice and the actual contests carefully observed. Although the difficult element of intimate personal collision still continued a prominent feature of the game, the outcome of the season proved that foot-ball could be played in a sportsmanlike manner, even where there was a spirit of keen competition and in the presence of intensely partisan spectators. That the primal objections to the present game can ever be entirely removed is improbable.

The interest in the minor sports as a whole showed considerable increase, and a vigorous effort was made by the various managements to render them self-supporting. To encourage this effort, the Committee adopted the policy of appropriating any surplus in a branch in one season for the benefit of the following management, instead of turning such surplus back into the general fund.

When the minor sports began to attract more attention fear was expressed (see President's Reports, 1902–03, pp. 40–41; and 1903–04, p. 122) that the athletic season might become continuous throughout the academic year. This has now become a fact. At first those taking part constituted fairly distinct groups, but as the minor sports gained in importance the natural tendency was to draft off more of the tested athletes from the major branches for use in the winter sports. In anticipation of this very tendency, the Committee in October, 1904, passed a rule limiting individual participation in intercollegiate athletics to two periods of sport in any one academic year. This rule simply indicated the unwillingness of the Committee to countenance the continued devotion to athletics, and the amount of

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absenteeism involved in membership on some University athletic team during the whole academic year. The rule applies only to intercollegiate, not to interclass or intramural contests, and was not designed to prevent men from taking any amount of exercise desired.

It may surprise many to learn that probably no regulation of the Committee has been attacked so severely and generally by the undergraduate body as this seemingly reasonable restriction, reasonable, at least, from the standpoint of the teacher and in most cases of the parent. The college press printed the arguments on both sides. The controversy illustrates once more the difficulty of regulating conduct by rule.

## V. Legislation.

The Committee held twenty-two meetings during the academic year, as compared with twenty-four meetings in 1905–06.

Considerable trouble has been experienced in keeping foot-ball tickets for the Harvard and Yale games out of the hands of speculators, although these tickets are sold only to Harvard and Yale men. The athletic authorities at both universities have taken strict methods to prevent speculation in such tickets, and in some cases the names have been published of persons whose tickets were found in the hands of speculators, while a number of tickets were replevined from the possession of speculators themselves. A list of the men whose tickets for the 1906 game were thus traced was made, with the evidence appended, and the whole matter was referred to the Committee on Tickets for 1907, in order that that Committee might use its discretion about issuing tickets to any on the list who might apply again.

The cups, banners, and other trophies which were formerly stored in the gymnasium have been transferred to a room in the Union and duly installed. The Trophy Room Committee was authorized to take measures to preserve the various banners which were falling into a state of decay.

An application of representatives of some of the minor sports, requesting that specific appropriations be made for such branches, and that the collection of subscriptions be discontinued, was denied. The whole question of subscriptions and of the treatment of the minor branches must, however, be considered to be in a transitional stage.

Owing to the uncertainty regarding the future of Harvard athletics, notice was sent to Yale that for the present Harvard would be unable to renew the two-year agreement which expired in March, 1907. By

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joint action, however, contests occurring since have been held subject to said agreement.

On account of the increasing number of requests from outsiders to use the university athletic equipment, the Committee has passed a general regulation that no such requests would be granted. In a few special cases this rule was suspended with the approval of the Corporation. A standing exception is the use of the tennis courts by outsiders during the summer vacation.

The Committee declined an invitation to join the new National Intercollegiate Athletic Association, although sympathizing with the aims of that organization, aims which Harvard has pursued for many years.

HORATIO S. WHITE, *Chairman.*

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# THE GRADUATE SCHOOL OF ARTS AND SCIENCES.

To the President of the University: —

Sir, — As Acting Dean, in the absence of Dean Wright, I have the honor to submit a report on the School for the academic year 1906–07.

The members of the Administrative Board were Professors Mark, G. F. Moore, H. W. Smyth, Kittredge, Münsterberg, Sabine, Bôcher, Gay, and Walz, and the Acting Dean. Professors Gay and Walz were members for the first time. Early in the year Professor Bôcher resigned his office as secretary to the Board, and Professor Walz was elected in his place. The Board met thirteen times in the course of the year.

In this report I shall first present, with brief comments, the customary tables, in which the condition of the School is set forth in tabular form; then lists of the Doctors of Philosophy and Fellows of 1906–07, with a statement of their present occupations; following these by certain remarks in regard to new scholarships and fellowships, the assignment of fellowships and scholarships, the requirements for degrees, and, finally, the entity of the School.

Table I, to which Tables II, III, and IV are supplementary, shows the number of students in the School, resident and non-resident; their subjects of study; length of residence; and the numbers of those who hold or do not hold the Harvard first and second degrees. It shows practically no change in total membership; the largest proportion yet recorded of resident students doing full work for the whole year; and the highest percentages of students holding no Harvard degree, and of students holding no Harvard first degree in Arts and Sciences, in the history of the School. Of two hundred and twenty-eight first-year students, one hundred and forty-seven, or sixty-four per cent., came from colleges other than Harvard.

Table V gives a list of colleges and universities represented by four or more graduates in the School: twenty-four in 1906–07, as against seventeen in 1905–06.

Table VI, Birthplaces of Graduate Students, shows that less than one-third of our students are of New England nativity, and that nearly one-sixth are foreign born.

The Administrative Board of the School has general charge, under the Faculty of Arts and Sciences, of the administration of the higher degrees of Doctor of Philosophy, Doctor of Science, Master of Arts, and Master of Science, and makes recommendations to the Faculty

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for these degrees. Table VII shows the number of recommendations* for the higher degrees in 1905, 1906, and 1907. Table VIII gives the number of recommendations for 1907, classified according to the Divisions and Departments of the Faculty. The decrease in recommendations for the degree of Master of Arts in professional studies is particularly gratifying. It is to be hoped that, whether by enactment or by natural evolution, the anomaly of granting this degree by the Faculty of Arts and Sciences on ordinary professional studies under other Faculties will be brought to an end.

Table IX presents the usual statistics as to the assignment of fellowships and scholarships.

TABLE I. — NUMBER AND CLASSIFICATION OF STUDENTS.

| | 1904–05. | | 1905–06. | | 1906–07. | |
|---|---|---|---|---|---|---|
| I. Resident Students doing full work in the School for the whole academic year . . . | 273 | | 260 | | 281 | |
| Resident Students not doing full work or not working for the whole year as Resident Students . . . . . | 105 | | 133 | | 105 | |
| | — | 378 | — | 393 | — | 386 |
| Non-Resident Students holding fellowships . | 15 | | 16 | | 21 | |
| Non-Resident Students not holding fellowships | 2 | | 0 | | 0 | |
| | — | 17 | — | 16 | — | 21 |
| II. Students whose studies lay chiefly in † | | | | | | |
| i. Semitic Languages and History . . . . . | 2 | | 2 | | 0 | |
| ii. Ancient Languages (Classics and Sanskrit) | 34 | | 35 | | 29 | |
| iii. Modern Languages (including Comparative Literature) . . . . . | 96 | | 112 | | 106 | |
| iv. History and Political Science . . . . . | 86 | | 82 | | 89 | |
| v. Philosophy . . . . . | 52 | | 40 | | 32 | |
| vi. Education . . . . . | | | | | 24 | |
| vii. Fine Arts (including Architecture) . . . | 19 | | 13 | | 5 | |
| viii. Music . . . . . | 4 | | 9 | | 5 | |
| ix. Mathematics . . . . . | 14 | | 13 | | 24 | |
| x. Physics . . . . . | 14 | | 12 | | 9 | |
| xi. Chemistry . . . . . | 27 | | 39 | | 37 | |
| xii. Engineering . . . . . | 3 | | 10 | | 5 | |
| xiii. Forestry . . . . . | | | | | 1 | |
| xiv. Biology . . . . . | 20 | | 22 | | 17 | |
| xv. Geology . . . . . | 14 | | 10 | | 9 | |
| xvi. Mining and Metallurgy . . . . . | | | | | 1 | |
| xvii. Anthropology . . . . . | 5 | | 3 | | 5 | |
| Unclassed Students . . . . . | 5 | | 7 | | 9 | |
| | — | 395 | — | 409 | — | 407 |

* The number of persons recommended each year, and that of the men who actually receive the degree, as published in the Annual Catalogue, do not always agree. Usually a few of the candidates recommended do not receive the degree at once. The degree is in these cases ordinarily conferred in a later year, "as of" the year in which the recommendation was made.

† For detailed statistics as to the number of Graduate Students enrolled in the various courses of instruction offered by the Faculty of Arts and Sciences, see the Report of the Dean of that Faculty, pp. 57–89.

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| | | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|
| III. | First-year Students | 237 | 220 | 228 |
| | Second-year Students | 92 | 109 | 87 |
| | Third-year Students | 45 | 54 | 54 |
| | Fourth-year Students | 18 | 16 | 29 |
| | Students in a fifth or later year | 3 | 10 | 9 |
| | | — 395 | — 409 | — 407 |
| IV. | A.B.'s and S.B.'s of Harvard University and of no other institution | 124 | 126 | 120 |
| | A.B.'s and S.B.'s (and holders of similar degrees) of other institutions and also of Harvard University | 15 | 20 | 15 |
| | Students not holding the Harvard degree of A.B. or S.B. | 256 | 263 | 272 |
| | | — 395 | — 409 | — 407 |
| V. | Students holding the Harvard degree of A.M., S.M., Ph.D., or S.D. | 95 | 103 | 101 |
| | Students holding the Harvard degree of A.B. or S.B., but not of A.M., S.M., Ph.D., or S.D. | 94 | 92 | 81 |
| | Students holding no Harvard degree in Arts, Philosophy, or Science | 206 | 214 | 225 |
| | | — 395 | — 409 | — 407 |

TABLE II. — PERCENTAGE OF STUDENTS IN THEIR FIRST AND FOLLOWING YEARS: 1901–07.

| | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|
| | Per cent. | Per cent. | Per cent. | Per cent. | Per cent. | Per cent. |
| First-year Students | 50 | 54 | 61 | 60 | 53 | 56 |
| Second-year Students | 26 | 26 | 21 | 24 | 26 | 21 |
| Third-year Students | 12 | 11 | 12 | 11 | 13 | 14 |
| Fourth-year Students and Students of longer residence | 12 | 9 | 6 | 5 | 8 | 9 |

TABLE III. — PERCENTAGE OF STUDENTS FROM OTHER COLLEGES.

| | 1897–98. | 1898–99. | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of Students holding no Harvard degree | 40 | 41 | 44 | 44 | 40 | 46 | 46 | 52 | 52 | 55 |
| Percentage of Students holding no Harvard first degree in Arts or Sciences | 55 | 55 | 61 | 62 | 56 | 62 | 59 | 65 | 64 | 67 |

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TABLE IV. — RESIDENT STUDENTS DOING FULL WORK, AND NON-RESIDENT STUDENTS: 1887–1907.

| | 1887–88. | 1888–89. | 1889–90. | 1890–91. | 1891–92. | 1892–93. | 1893–94. | 1894–95. | 1895–96. | 1896–97. | 1897–98. | 1898–99. | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Resident Students doing full work in the School for the whole academic year . | 48 | 50 | 62 | 62 | 108 | 127 | 162 | 161 | 175 | 194 | 171 | 218 | 227 | 226 | 218 | 216 | 289 | 273 | 260 | 281 |
| Resident Students not doing full work or not working for the whole year as Resident Students . . . . . | 36 | 39 | 34 | 55 | 79 | 73 | 86 | 94 | 105 | 96 | 107 | 103 | 99 | 113 | 86 | 94 | 123 | 105 | 133 | 105 |
| Whole number of Resident Students . | 84 | 89 | 96 | 117 | 187 | 200 | 248 | 255 | 280 | 290 | 278 | 321 | 326 | 339 | 304 | 310 | 412 | 378 | 393 | 386 |
| Non-Resident Fellows . . . . . | 10 | 9 | 11 | 11 | 9 | 9 | 10 | 12 | 13 | 14 | 15 | 12 | 13 | 14 | 11 | 15 | 14 | 15 | 16 | 21 |
| Other Non-Resident Students . . . . . | 3 | 1 | 4 | 4 | 4 | 7 | 1 | 5 | 6 | 2 | . . | 3 | 2 | . . | . . | . . | 1 | 2 | . . | . . |
| Whole number of Non-Resident Students | 13 | 10 | 15 | 15 | 13 | 16 | 11 | 17 | 19 | 16 | 15 | 15 | 15 | 14 | 11 | 15 | 15 | 17 | 16 | 21 |
| Whole number of students . . . . . | 97 | 99 | 111 | 132 | 200 | 216 | 259 | 272 | 299 | 306 | 293 | 336 | 341 | 353 | 315 | 325 | 427 | 395 | 409 | 407 |
| Percentage of Resident Students doing full work for whole academic year . | 57 | 56 | 65 | 53 | 58 | 64 | 65 | 63 | 63 | 67 | 62 | 68 | 70 | 67 | 72 | 70 | 70 | 72 | 66 | 73 |

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TABLE V. — COLLEGES AND UNIVERSITIES REPRESENTED BY FOUR OR MORE GRADUATES IN THE SCHOOL: 1902–03, 1903–04, 1904–05, 1905–06, 1906–07.

| 1902–03. | | 1903–04. | | 1904–05. | | 1905–06. | | 1906–07. | |
|---|---|---|---|---|---|---|---|---|---|
| Harvard, | 174 | Harvard, | 232 | Harvard, | 192 | Harvard, | 197 | Harvard, | 185 |
| Brown, | 11 | Amherst, | 14 | Ohio Wesleyan, | 14 | Brown, | 12 | Dartmouth, | 10 |
| Amherst, | 10 | Brown, | 12 | Dartmouth, | 9 | Ohio Wesleyan, | 12 | Boston Univ., | 8 |
| Bowdoin, | 7 | Dartmouth, | 12 | Amherst, | 8 | Michigan, | 10 | Toronto, | 8 |
| Dartmouth, | 7 | Michigan, | 10 | Williams, | 8 | Amherst, | 8 | Amherst, | 7 |
| Chicago, | 7 | Yale, | 9 | Brown, | 7 | Yale, | 8 | Columbia, | 7 |
| Michigan, | 7 | Ohio Wesleyan, | 8 | Yale, | 6 | Boston Univ., | 7 | Yale, | 7 |
| Columbia, | 6 | Bowdoin, | 7 | Boston Univ., | 5 | Williams, | 7 | Michigan, | 6 |
| Leland Stanford Jr., | 6 | Haverford, | 7 | Bowdoin, | 5 | Cornell Univ., | 6 | Vanderbilt, | 6 |
| Northwestern, | 6 | Williams, | 7 | Cornell Univ., | 5 | Dartmouth, | 6 | Bowdoin, | 5 |
| Tufts, | 6 | Tufts, | 6 | Haverford, | 5 | Haverford, | 5 | California, | 5 |
| California, | 6 | West Virginia, | 6 | Leland Stanford Jr., | 5 | Chicago, | 4 | Cornell Univ., | 5 |
| Yale, | 6 | Boston Univ., | 5 | State Univ. of Iowa, | 5 | Columbia, | 4 | Haverford, | 5 |
| Haverford, | 5 | Columbia, | 5 | Michigan, | 5 | Dalhousie, | 4 | Indiana, | 5 |
| Ohio Wesleyan, | 5 | Texas, | 5 | Rochester, | 5 | Indiana, | 4 | Kansas, | 5 |
| Trinity (Conn.), | 5 | Leland Stanford Jr., | 4 | Toronto, | 5 | Rochester, | 4 | Missouri, | 5 |
| Texas, | 5 | Trinity (Conn.), | 4 | Bates, | 4 | Vanderbilt, | 4 | Queen's, | 5 |
| Beloit, | 4 | California, | 4 | Missouri, | 4 | | | Rochester, | 5 |
| New York, | 4 | Pennsylvania, | 4 | Pennsylvania, | 4 | | | Acadia, | 4 |
| Williams, | 4 | Toronto, | 4 | Vanderbilt, | 4 | | | Brown, | 4 |
| Wofford, | 4 | Wesleyan (Conn.), | 4 | | | | | Chicago, | 4 |
| | | | | | | | | Ohio Wesleyan, | 4 |
| | | | | | | | | Princeton, | 4 |
| | | | | | | | | State Univ. of Iowa, | 4 |
| Total Membership, | 325 | | 427 | | 395 | | 409 | | 313 |

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TABLE VI. — BIRTHPLACES OF GRADUATE STUDENTS: 1899–1907.

| | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|---|---|
| Students born in the New England States | 122 | 127 | 107 | 122 | 168 | 132 | 149 | 131 |
| Students born in other Northern States east of the Mississippi River | 119 | 136 | 109 | 108 | 141 | 142 | 135 | 148 |
| Students born in Southern States east of the Mississippi River | 17 | 16 | 11 | 14 | 31 | 21 | 20 | 21 |
| Students born in States west of the Mississippi River | 34 | 30 | 39 | 39 | 35 | 42 | 44 | 44 |
| Students born in the Dominion of Canada | 23 | 21 | 22 | 16 | 17 | 19 | 24 | 28 |
| Students born in other foreign countries | 26 | 23 | 27 | 26 | 35 | 39 | 37 | 35 |
| Total number of students | 341 | 353 | 315 | 325 | 427 | 395 | 409 | 407 |
| Percentage of students born in New England | 36 | 36 | 34 | 38 | 39 | 33 | 37 | 32 |
| Percentage of students born elsewhere | 64 | 64 | 66 | 62 | 61 | 67 | 63 | 68 |

TABLE VII. — RECOMMENDATIONS FOR DEGREES IN 1905–07.

| | 1905. | | 1906. | | 1907. | |
|---|---|---|---|---|---|---|
| I. Graduate Students recommended for A.B. | 2 | | 1 | | 0 | |
| Graduate Students recommended for A.M. | 106 | | 85 | | 120 | |
| Graduate Students recommended for S.M. | 4 | | 3 | | 2 | |
| Graduate Students recommended for Ph.D. | 38 | | 44 | | 31 | |
| Graduate Students recommended for S.D. | 0 | 150 | 0 | 133 | 1 | 154 |
| II. College Seniors recommended for A.M. | 0 | | 1 | | 0 | |
| College Seniors of a preceding year, recommended for A.M. on work done in Senior year | 26 | | 15 | | 1 | |
| College Juniors of a preceding year, recommended for A.M. on work done in Junior year | 0 | | 1 | | 1 | |
| Professional students recommended for A.M. on special courses of study | 10 | | 16 | | 8 | |
| Professional students recommended for Ph.D. on special courses of study | 1 | 37 | 2 | 35 | 2 | 12 |
| Total of the above list | | 187 | | 168 | | 166 |
| Deduct Graduate Students recommended for A.B. | | 2 | | 1 | | 0 |
| Total number recommended for A.M., S.M., Ph.D., and S.D. | | 185 | | 167 | | 166 |

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| | 1905. | 1906. | 1907. |
|---|---|---|---|
| III. Harvard Bachelors of Arts or Science, not previously graduated elsewhere | 78 | 63 | 66 |
| Harvard Bachelors of Arts or Science, previously graduated elsewhere | 3 | 6 | 8 |
| Students not Harvard Bachelors of Arts or Science | 104 185 | 92 167 | 92 166 |

TABLE VIII.—DIVISIONS AND DEPARTMENTS IN WHICH RECOMMENDATIONS FOR THE HIGHER DEGREES WERE MADE IN 1906.

| DIVISION. DEPARTMENT. | DEGREES. A.M. | S.M. | PH.D. | S.D. |
|---|---|---|---|---|
| I. Semitic Languages and History | .. | .. | .. | .. |
| II. Ancient Languages: | | | | |
| Indic Philology | .. | .. | .. | .. |
| The Classics (Greek, Latin) | 10 | .. | 4 | .. |
| Total in Ancient Languages | — 10 | — .. | — 4 | — .. |
| III. Modern Languages: | | | | |
| English | 24 | .. | 6 | .. |
| Germanic Languages and Literatures | 4 | .. | 3 | .. |
| French, and other Romance Languages and Literatures | 4 | .. | 1 | .. |
| Comparative Literature | .. | .. | .. | .. |
| In more than one Department | 3 | .. | .. | .. |
| Total in Modern Languages | — 35 | — .. | — 10 | — .. |
| IV. History and Political Science: | | | | |
| History and Government | 18 | .. | 3 | .. |
| Political Economy | 5 | .. | 1 | .. |
| Total in Hist. and Political Sci. | — 23 | — .. | — 4 | — .. |
| V. Philosophy | 13 | .. | 5 | .. |
| VI. Education | 9 | .. | .. | .. |
| VII. The Fine Arts: | | | | |
| History and Principles of the Fine Arts | 1 | .. | .. | .. |
| Architecture | .. | .. | .. | .. |
| Total in the Fine Arts | — 1 | — .. | — .. | — .. |
| VIII. Music | 3 | .. | .. | .. |
| IX. Mathematics | 8 | .. | 1 | .. |
| X. Physics | 1 | .. | 1 | .. |
| XI. Chemistry | 9 | 1 | 2 | .. |
| XII. Engineering | .. | .. | .. | .. |
| XIII. Forestry | 1 | .. | .. | .. |
| XIV. Biology: | | | | |
| Botany | .. | .. | 1 | .. |
| Zoölogy | 2 | 1 | 3 | 1 |
| Total in Biology | — 2 | — 1 | — 4 | — 1 |

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| Division. | Department. | Degrees. A.M. | S.M. | Ph.D. | S.D. |
|---|---|---|---|---|---|
| XV. Geology: | | | | | |
| | Geology and Geography | 1 | .. | .. | .. |
| | Mineralogy and Petrography | .. | .. | .. | .. |
| | Total in Geology | — 1 | — .. | — .. | — .. |
| XVI. Mining and Metallurgy | | 1 | .. | .. | .. |
| XVII. Anthropology | | 1 | .. | .. | .. |
| In more than one Division | | 4 | .. | .. | .. |
| Professional Students: | | | | | |
| | Divinity School | 6 | .. | 2 | .. |
| | Law School | 1 | .. | .. | .. |
| | Medical School | 1 | .. | .. | .. |
| | Total | 130 | 2 | 33 | 1 |

## Table IX. — Fellowships and Scholarships (1905–08).

### 1. *Applications and Appointments.*

| | 1905–06. | | 1906–07. | | 1907–08. | |
|---|---|---|---|---|---|---|
| Spring applicants for reappointment or promotion | 46 | | 57 | | 48 | |
| Spring applicants for a first appointment | 211 | | 222 | | 233 | |
| Later applicants | 44 | 301 | 44 | 323 | 39 | 320 |
| Appointed to fellowships | 21 | | 27 | | 23 | |
| Appointed to scholarships | 54 | | 61 | | 73 | |
| Appointed instructors, teaching fellows, or assistants | 25 | 100 | 28 | 116 | 26 | 122 |
| Deduct for repetitions | | 2 | | 7 | | 5 |
| | | 98 | | 109 | | 117 |
| Entered or continued in the Graduate School of Arts and Sciences without receiving any of the above-named appointments | 38 | | 50 | | 50 | |
| Entered undergraduate classes of Harvard College | 1 | | 2 | | 3 | |
| Entered other Departments of the University | 1 | 40 | 3 | 55 | 2 | 55 |
| Applicants who were at the University in the year following their applications | | 138 | | 164 | | 172 |
| Applicants not at the University in that year | | 163 | | 159 | | 148 |
| | | 301 | | 323 | | 320 |

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2. *Classification of Applicants and Appointees.*

| | 1905–06. | | 1906–07. | | 1907–08. | |
|---|---|---|---|---|---|---|
| | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. |
| Students of Philology | 122 | 25 | 124 | 28 | 130 | 32 |
| Students of Philosophy, History, or Political Science | 85 | 21 | 105 | 28 | 91 | 28 |
| Students of Mathematics, Physics, and Chemistry | 61 | 15 | 62 | 15 | 64 | 21 |
| Students of Natural History | 25 | 11 | 22 | 10 | 26 | 10 |
| Students of other branches, or unclassified | 8 | 3 | 10 | 7 | 9 | 5 |
| | 301 | 75 | 323 | 88 | 320 | 96 |
| Students in Graduate School of Arts and Sciences | 99 | 50 | 103 | 45 | 91 | 40 |
| Students in Harvard College | 19 | 3 | 23 | 5 | 28 | 10 |
| Students in other Departments of the University | 3 | 2 | 6 | 2 | 7 | 3 |
| Former students in some Department of the University | 26 | 2 | 31 | 12 | 35 | 15 |
| Persons never previously members of the University | 154 | 18 | 160 | 24 | 159 | 28 |
| | 301 | 75 | 323 | 88 | 320 | 96 |
| Harvard Bachelors of Arts or Science, not previously graduated elsewhere | 36 | 16 | 39 | 18 | 32 | 16 |
| Harvard Bachelors of Arts or Science, previously graduated elsewhere | 14 | 3 | 8 | 3 | 9 | 5 |
| Graduates of other institutions, not Harvard Bachelors of Arts or Science | 209 | 50 | 220 | 58 | 234 | 58 |
| Undergraduates of Harvard College or Lawrence Scientific School, not already graduated elsewhere | 22 | 5 | 29 | 8 | 26 | 10 |
| Undergraduates of other institutions and other non-graduates | 20 | 1 | 27 | 1 | 19 | 7 |
| | 301 | 75 | 323 | 88 | 320 | 96 |

The degree of Doctor of Philosophy was conferred upon the thirty-three men named below. With each name is indicated the subject and the special field in which the degree was taken, the candidate's academic degrees, the subject of his thesis, and his present occupation. Of the thirty-three, twenty-four are now teaching in colleges, and one in a secondary school; six are continuing their studies, five as travelling fellows in Europe; one is a clergyman, and one a librarian.

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EDWARD LARRABEE ADAMS, A.B. 1900, A.M. 1901.
*Subject*, Philology. *Special Field*, Romance Philology. *Thesis*, "Word Formation in Provençal." Instructor in Romance Languages, University of Michigan.

JOHN MEAD ADAMS, A.B. 1903, A.M. 1905.
*Subject*, Physics. *Special Field*, Radiation. *Thesis*, "The Transmission of Röntgen Rays through Metallic Sheets." Assistant in Physics at this University.

ARTHUR MANGUN BANTA, A.B. (*Indiana Univ.*) 1903, A.M. (*ibid.*) 1904.
*Subject*, Biology. *Special Field*, Zoölogy. *Thesis*, "A Comparison of the Reactions of a Species of Terranean with those of a Species of Subterranean Isopod." Associate Professor of Biology, Marietta College.

MARSHALL ALBERT BARBER, A.B. (*Univ. of Kansas*) 1891, A.B. (*Harvard Univ.*) 1892, A.M. (*ibid.*) 1894.
*Subject*, Biology. *Special Field*, Botany. *Thesis*, "On Heredity in certain Microörganisms." Associate Professor of Cryptogamic Botany and Bacteriology, University of Kansas.

JOSEPH WARREN BEACH, A.B. (*Univ. of Minnesota*) 1900, A.M. (*Harvard Univ.*) 1902.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Loathly Lady: A Study in the Popular Elements of the Wife of Bath's Tale." Assistant Professor of English, University of Minnesota.

ERNEST BERNBAUM, A.B. 1902, A.M. 1905.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Origin and Influence of Sentimental and Domestic Drama in England and in France." Instructor in English at this University.

CHARLES SCOTT BERRY, A.B. (*Hiram Coll.*) 1903, A.M. (*Harvard Univ.*) 1905.
*Subject*, Philosophy. *Special Field*, Psychology. *Thesis*, "An Experimental Study of Imitation in Animals." Continuing his studies at Berlin, as James Walker Fellow.

WILLIAM CHARLES BRENKE, S.B. in Chem. (*Univ. of Illinois*) 1896, S.B. in Math. and Astron. (*ibid.*) 1897, S.M. (*ibid.*) 1899.
*Subject*, Mathematics. *Special Field*, Analysis. *Thesis*, "A Contribution to the Theory of Trigonometric and Zonal Harmonic Series." Adjunct Professor of Mathematics, University of Nebraska.

SERENO BURTON CLARK, A.B. (*Univ. of Michigan*) 1901.
*Subject*, Philology. *Special Field*, Classical Philology. *Thesis*, "Utrum Ovidius Epistulas Heroidum XVI-XXI scripserit et quo tempore quaeritur." Instructor in Greek and Latin, Western Reserve University.

WILLIAM HALL CLAWSON, A.B. (*Univ. of New Brunswick*) 1900, A.B. (*Harvard Univ.*) 1901, A.M. (*ibid.*) 1902.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Robin Hood Ballads." Lecturer in English, University College, Toronto.

HERBERT SPENCER DAVIS, PH.B. (*Wesleyan Univ., Conn.*) 1899.
*Subject*, Biology. *Special Field*, Zoölogy. *Thesis*, "Spermatogenesis in Acrididae and Locustidae." Assistant Professor of Zoölogy, Washington Agricultural College.

HORATIO WILLIS DRESSER, A.B. 1894, A.M. 1904.
*Subject*, Philosophy. *Special Field*, Metaphysics. *Thesis*, "The Element of Irrationality in the Hegelian Dialectic." Assistant in Philosophy at this University.

LOUVILLE EUGENE EMERSON, A.M. 1905.
*Subject*, Philosophy. *Special Field*, Psychology and Ethics. *Thesis*, "An Investigation in the Simultaneous Stimulation of Adjacent Touch Spots on the Skin." Instructor in Psychology, University of Michigan.

CALVIN OLIN ESTERLY, A.B. (*Univ. of California*) 1902, A.M. (*ibid.*) 1904.
*Subject*, Biology. *Special Field*, Zoölogy. *Thesis*, "The Light-Recipient Organs of the Copepod Eucalanus elongatus." Professor of Biology, Occidental College.

CHARLES SHATTUCK FOX, A.B. (*Univ. of Rochester*) 1891, LL.B. (*Albany Law School*) 1893, A.M. (*Harvard Univ.*) 1903.
*Subject*, Philology. *Special Field*, Germanic Philology. *Thesis*, "The Omission of the Auxiliaries *haben* and *sein* in Subordinate Clauses." Instructor in Modern Languages, Lehigh University.

HOWARD LEVI GRAY, A.B. (*Univ. of Rochester*) 1897, A.B. (*Harvard Univ.*) 1898, A.M. (*ibid.*) 1900.
*Subject*, History. *Special Field*, Economic History. *Thesis*, "A Contribution to the Study of Anglo-Saxon Settlement." Continuing his studies at London, as Edward William Hooper Fellow.

RICHARD MOTT GUMMERE, A.B. (*Haverford Coll.*) 1902, A.M. (*Harvard Univ.*) 1904.
*Subject*, Philology. *Special Field*, Classical Philology. *Thesis*, "De Variis Similitudinum Generibus apud Poetas Latinos ante Aetatem Augusteam." Instructor in Latin, Haverford College.

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JOHN GYÖRGY, J.U.D. (*Univ. of Kolozsvár*) 1901.
*Subject*, Philosophy. *Special Field*, Social Ethics. *Thesis*, "Faith and Social Progress: Prospective and Retrospective Social Evolution Conceived as Progressive Faith Manifestation." Instructor in New Testament Exegesis and Sociology, University of Kolozsvár, Hungary.

CHARLES PHILLIPS HUSE, A.B. 1904, A.M. 1905.
*Subject*, Economics. *Special Field*, Public Finance. *Thesis*, "The Financial History of Boston from 1822 to 1859." Austin Teaching Fellow in Economics at this University.

HERMAN BRUNSWICK KIPPER, S.B. 1904, A.M. 1905.
*Subject*, Chemistry. *Special Field*, Organic Chemistry. *Thesis*, "Ketone Substitution Derivatives of Orthohydroxyketones, Alkali-Insoluble Phenols." Continuing his studies at this University.

JOHN EDWARDS LEBOSQUET, A.B. 1896, S.T.B. (*Andover Theol. Seminary*) 1899, A.M. (*Harvard Univ.*) 1906.
*Subject*, Philosophy. *Special Field*, Philosophy of Religion. *Thesis*, "True and False in Miracle." Assistant in Philosophy at this University.

WALTER LICHTENSTEIN, PH.B. (*New York Univ.*) 1899, A.B. (*Harvard Univ.*) 1900, A.M. (*ibid.*) 1901.
*Subject*, History. *Special Field*, History of Germany. *Thesis*, "The Turkish Peril and the German Reformation." Assistant in charge of European History in the Library of this University.

FREDERICK WILLIAM CHARLES LIEDER, A.B. (*Cornell Univ.*) 1902, A.M. (*ibid.*) 1903.
*Subject*, Philology. *Special Field*, Germanic Philology. *Thesis*, "Friedrich Spe: Studies on the *Trvts Nachtigal*, and on the Relation between the *Güldenes Tugendbuch* and Leibniz's *Théodicée*." Instructor in German at this University.

DEAN PUTNAM LOCKWOOD, A.B. 1903, A.M. 1904.
*Subject*, Philology. *Special Field*, Classical Philology. *Thesis*, "De Vita Operibusque Rinucci Aretini." Continuing his studies in Italy, as Parker Fellow.

HENRY NOBLE MACCRACKEN, A.B. (*New York Univ.*) 1900, A.M. (*ibid.*) 1904, A.M. (*Harvard Univ.*) 1905.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "Studies in the Life and Writings of John Lydgate, the Monk of Bury." Continuing his studies at Oxford, as John Harvard Fellow.

WILLIAM ALFRED MORRIS, A.B. (*Leland Stanford Jr. Univ.*) 1901.
*Subject*, History. *Special Field*, English History. *Thesis*, "The Frankpledge System." Instructor in History, University of Washington.

EDWARD MUELLER, S.B. (*Purdue Univ.*) 1902, A.M. (*Harvard Univ.*) 1905.
*Subject*, Chemistry. *Special Field*, Inorganic Chemistry. *Thesis*, "The Atomic Weights of Potassium and Chromium." Instructor in Chemistry, Medical School of Washington University.

ALBERT GRANBERRY REED, A.B. (*Vanderbilt Univ.*) 1895, A.M. (*Yale Univ.*) 1899.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "Jonson's Influence on Non-Dramatic Poetry of the Seventeenth Century before 1660." Instructor in English, University of Missouri.

MORTON COLLINS STEWART, PH.B. (*Brown Univ.*) 1894, A.M. (*ibid.*) 1896.
*Subject*, Philology. *Special Field*, Germanic Philology. *Thesis*, "Brockes's Rendering of Thomson's 'Seasons' and the Later German Translations." Instructor in German at this University.

EDGAR THACKRAY, A.B. (*Victoria Univ., England*) 1902, A.B. (Honor Degree) (*ibid.*) 1904, A.M. (*ibid.*) 1905.
*Subject*, Philosophy. *Special Field*, History of Greek Philosophy. *Thesis*, "A Comparative Study of Sense Perception in Greek Philosophy." Pastor, Fitzwilliam Street Unitarian Church, Huddersfield, Yorkshire, England.

ALEXANDER MACKENZIE THOMPSON, A.M. (*Queen's Univ.*) 1902, A.B. (*Harvard Univ.*) 1903, A.M. (*ibid.*) 1904.
*Subject*, Philology. *Special Field*, Classical Philology. *Thesis*, "De Ratione quae inter Scholiastam in Statii Thebaïda et Hyginum Mythographum intercedat." Instructor in Greek, University School, Cleveland, O.

KARL TINSLEY WAUGH, A.B. (*Ohio Wesleyan Univ.*) 1900, A.M. (*ibid.*) 1901, A.M. (*Harvard Univ.*) 1906.
*Subject*, Philosophy. *Special Field*, Psychology. *Thesis*, "The Rôle of Vision in the Mental Life of the Mouse." Associate in Psychology, University of Chicago.

KARL YOUNG, A.B. (*Univ. of Michigan*) 1901, A.M. (*Harvard Univ.*) 1902.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Origin and Development of the Story of Troilus and Criseyde." Continuing his studies at Paris, as Parker Fellow.

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There was one Doctor of Science: —

ERNEST LINWOOD WALKER, B.A.S. 1896, S.B. 1903.
*Subject*, Biology. *Special Fields*, Medical Zoölogy and Bacteriology. *Thesis*, "The Parasitic Amœbæ of the Intestinal Tract of Man and other Animals." Bacteriologist in charge of the Diagnostic Laboratory of the Massachusetts State Board of Health.

Thirty fellowships were assigned for the year 1906–07, including six John Harvard Fellowships without stipend. There were ten resident and twenty non-resident appointments. A list of the incumbents follows. After the name of each fellow is given the name of his fellowship, the subject that he studied, and his present occupation. The place of study of the non-resident fellows is also indicated.

## NON-RESIDENT FELLOWS.

WALTER EUGENE CLARK, Rogers Fellow. Indic Philology. Berlin.
Instructor in Sanskrit, University of Chicago.

GEORGE SHANNON FORBES, John Harvard Fellow. Chemistry. Leipsic.
Associate in Chemistry, Bryn Mawr College.

JAMES FORD, Robert Treat Paine Fellow. Social Science. Paris, Brussels, Berlin.
Assistant in Social Ethics. Fellow for Social Research on the Sage Foundation, in connection with the School for Social Workers. Fourth-year Graduate student.

HARRY LOUIS GIDEON, John Thornton Kirkland Fellow. Music. Paris.
Now residing in Cambridge.

LEROY ALBERT HOWLAND, Parker Fellow. Mathematics. Munich.
Reappointed. Continuing his studies at Munich.

ALEXANDER EDWARD HOYLE, Nelson Robinson Jr. Fellow. Architecture. Rome.
Reappointed. Continuing his studies in Europe.

ELLSWORTH HUNTINGTON, Edward William Hooper Fellow. Geography. Milton, Mass.
Instructor in Geography, Yale University.

BURRITT SAMUEL LACY, Parker Fellow. Chemistry. Carlsruhe.
Continuing his studies at Carlsruhe.

JOHN HANCOCK MCCLELLAN, Parker Fellow. Zoölogy. Berlin.
Associate in Zoölogy, University of Illinois.

JOHN TUCKER MURRAY, Edward William Hooper Fellow. English. London.
Continuing his studies in Europe.

CLARENCE PERKINS, Ozias Goodwin Memorial Fellow. History and Government. London, Oxford, Paris.
Instructor in History, University of Missouri.

WALTER JAMES SHEPARD, Rogers Fellow. History. London, Berlin.
Instructor in History, University of Wisconsin.

KENDALL KERFOOT SMITH, Charles Eliot Norton Fellow. Classical Archaeology. Athens.
Continuing his studies at Athens, as Fellow of the American School of Classical Studies.

ELIJAH SWIFT, John Harvard Fellow. Mathematics. Göttingen.
Preceptor in Mathematics, Princeton University.

CHARLES HANSEN TOLL, John Harvard Fellow. Philosophy. Travelled around the world.
Reappointed. Continuing his studies in Germany.

ABBOTT PAYSON USHER, Francis Parkman Fellow. History. Paris.
Assistant in Economics. Fourth-year Graduate student.

HARRY EDWARD WARREN, Julia Amory Appleton Fellow. Architecture. Rome.
Continuing his studies in Europe.

HERMANN JULIUS WEBER, John Harvard Fellow. Germanic Philology. Berlin.
Instructor in German at this University.

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ARTHUR FISHER WHITTEM, John Harvard Fellow. Romance Languages. Paris.
Instructor in Romance Languages at this University.

CASIMIR DOUGLASS ZDANOWICZ, Harris Fellow. Romance Languages. Paris.
Instructor in Romance Languages, University of Wisconsin.

## RESIDENT FELLOWS.

JOSEPH WARREN BEACH, Edward Austin Fellow. English.
Assistant Professor of English, University of Minnesota.

PERCY WILLIAMS BRIDGMAN, John Tyndall Scholar. Physics.
Reappointed. Fourth-year Graduate student.

HORACE MEYER KALLEN, James Walker Fellow. Philosophy.
Continuing his studies at Oxford, as Henry Bromfield Rogers Memorial Fellow.

WALTER WALLACE MCLAREN, Henry Lee Memorial Fellow. Economics.
Assistant in Economics. Third-year Graduate student.

CHARLES EDWARD PERSONS, Henry Bromfield Rogers Memorial Fellow. Economics.
Third-year Graduate student.

WILLIAM OSCAR SCROGGS, Edward Austin Fellow. History and Political Science.
Engaged in editorial work on the Encyclopaedia Britannica.

EUGENE LLOYD SHELDON, South End House Fellow. Sociology.
Engaged in newspaper work, New York City.

RALPH EDWARD SHELDON, Edward Austin Fellow. Zoölogy.
Graduate student, University of Chicago.

ALEXANDER MACKENZIE THOMPSON, John Harvard Fellow. Classics.
Instructor in Greek, University School, Cleveland, O.

KARL YOUNG, Edward Austin Fellow. English.
Continuing his studies at Paris, as Parker Fellow.

## NEW SCHOLARSHIPS AND FELLOWSHIPS.

An examination of the distribution of graduate scholarships and fellowships for several years past will show that very few, hardly more than one or two a year, have been awarded to men who are just taking a bachelor's degree elsewhere than at Harvard, and who desire at once to enter upon graduate study. It is therefore evident that our beneficiary funds are of very small direct effect in aiding such graduates to come to the School. The reason of this is not to be found in the lack of such candidates or in their inferior quality, but in the fact that applications from men of more maturity, who have not infrequently spent a year in the School doing excellent work without aid from scholarship funds, must be given precedence in the distribution of scholarships not limited to particular uses. It may be pointed out in this connection that several years ago a number of graduates of other colleges registered themselves as candidates for the Harvard degree of A.B. in Harvard College, where they, as newcomers, were often given aid from the Price Greenleaf Fund. It is now the practice of the College Committee on Admission to advise such men not to enter Harvard College; and the Committee on Undergraduate Scholarships has decided to reserve

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the Price Greenleaf aid for less mature applicants. This policy deprives the class of men referred to of the aid that they formerly received and substitutes no other aid. These facts were presented to the Faculty in May, and a recommendation was voted that the Corporation be requested "to establish twenty-five University Scholarships in the Graduate School of Arts and Sciences, to be given by preference to Seniors of high standing in Harvard and in other colleges, regard being had in the assignment of these scholarships to the geographical distribution of the beneficiaries." These twenty-five scholarships were instituted by the Corporation on May 27, and six of them were filled. It is believed that they will prove very useful in coming years.

Three new fellowships were established in the School near the close of the year. The Willard Scholarship (ranked as a fellowship) established, with a stipend of $450, from the bequest of John Bartlett, Esq., late of Cambridge, is "to be assigned each year to a person who has attained an established position as a teacher in a college or secondary school, or as a superintendent of schools, and intends to return to educational service after his residence in the University, preference to be given to teachers of literature and to graduates of Harvard College." The South End House Fellowship in Social Education, with an income for 1907–08 of $600 guaranteed by the South End House Association, is to be administered by the Division of Education in consultation with the Secretary of the Social Education Club and with the Head of the South End House, where the incumbent shall be in residence. Finally an anonymous friend of the Peabody Museum of American Archaeology and Ethnology has given the sum of $600 to maintain a fellowship in the Graduate School of Arts and Sciences for the year 1907–08, the incumbent to be required to pursue lines of research in Central American Archaeology and Ethnology approved by the Division of Anthropology.

## ASSIGNMENT OF SCHOLARSHIPS AND FELLOWSHIPS.

A communication was received in December from the Association of American Universities, suggesting that the several Universities constituting that Association should agree upon a uniform practice in the assignment of fellowships and scholarships for Graduate students. It was not intended under the proposed uniform practice to prevent a candidate from applying to more than one university, or to interfere in any way with his free choice among several scholarships that might be offered him by different universities, but to do

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away with the practice that has been felt objectionable in some quarters whereby a candidate who has been offered a scholarship of a certain value in one university tries at a later date to secure a more valuable scholarship in another university. After the proposed plan had been considered by the Committee on Fellowships and other Aids for Graduates, it was recommended to the Faculty that the latest date for receiving applications for Graduate scholarships and fellowships should be made uniform in all the universities concerned; that the date of appointment should likewise be as nearly uniform as possible, about April 1; that lists of candidates appointed to scholarships in each university should then be sent to all the other universities in the Association; and that later, revised lists, containing the names of appointees who have accepted their appointments, should be similarly distributed.

In the practical application of this plan, it was evidently desirable to reduce to the shortest period possible the interval between the last date of receiving applications and the date of action by the Faculty. For some years past this interval has been from forty to fifty days; prior to 1899 it was two months or more. Last year it was reduced to nineteen days, the saving of time being accomplished chiefly by notifying the several Divisions of the Faculty beforehand of the date on which the application papers would be sent them for consideration, so that the Division meetings could be held immediately after the receipt of the papers. In this way only five days were found necessary for action on the application papers by the Division committees; the following week proved sufficient for the action of the Committee on Fellowships and other Aids for Graduates in assigning the available fellowships and scholarships to the candidates recommended by the Division committees; and in the next week the assignment proposed by the Committee was adopted by the Faculty. The proposed plan was thus shown to be practicable as far as Harvard was concerned.

## REQUIREMENTS FOR DEGREES.

The requirements for the degree of A.M., for a thoroughly qualified candidate, and always subject to the minimum requirement of at least one full year of residence, are as a rule four advanced courses of study suitably related and completed with distinction. This practically means that if a candidate receives a grade of *C* or lower in any course or half-course, he fails to be recommended for a degree. The usual practice of such candidates has been to present themselves again for further study, and thus to complete their record.

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It has, however, recently happened that a number of unsuccessful candidates have petitioned to be allowed to make up their deficiency by studying *in absentia* and presenting themselves here only for reëxamination in the course in which the deficiency has occurred. After careful consideration of a number of these cases the Administrative Board *voted:* —

"That a student who has failed in a course for the A.M. degree shall not ordinarily be allowed to make up his deficiency by examination or by the substitution of a thesis for an examination."

Candidates for the degree of Ph.D. are required to devote at least two years to advanced work approved by the appropriate Division of the Faculty. Many candidates for the doctorate are, during part of their candidacy, appointed as Austin Teaching Fellows, and as such they are allowed to devote not more than half their time to advanced study or research. It is true that some of these men attain marks in this half or less of their time in as many as four advanced courses of study with high credit; but inasmuch as the work of a candidate for the doctorate is to be measured in time and not in courses, it follows that, however many courses he may carry on, an Austin Teaching Fellow can ordinarily be credited with only half a year towards his doctorate for each year in which he holds his fellowship. In view of this the Administrative Board *voted:* —

"That no Austin Teaching Fellow or assistant shall ordinarily be given credit for full residence.

"That assistants who give not more than six hours a week to assisting be ordinarily allowed to count the whole year toward the time requirement for the Ph.D."

The Board considered the subject with particular reference to the degree of Doctor of Philosophy; but it is obvious that the same principles hold good as respects the degrees of Master of Arts, Master of Science, and Doctor of Science, since in the case of each the requirement of residence and study is made in terms of full years and not of courses.

An advantageous rearrangement of the Catalogue statements regarding the requirements for degrees and certain other matters was made last year.

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## THE ENTITY OF THE SCHOOL.

The Graduate School of Arts and Sciences is peculiar among our graduate schools in that its students are scattered through many Departments of the Faculty. They cannot be housed together in the pursuit of their studies, as is so conveniently the case with students in the Law, Medical, and Divinity Schools; they have at present no natural reason for coming together, and they are all so busy that no artificial reason suffices to assemble them. As a result our students are largely unacquainted with each other, outside of the several departments; they never see themselves in a body; they are lost in the undergraduate crowd; they gain no impression of the personal and numerical strength of the School, such as is made daily on students in the Law and Medical Schools by the visible concourse of their own members. It is of course recognized that the greatest strength of the School lies in the opportunities that it affords for advanced study in close association with the teachers of our various departments, and that the development of these departments as such is thoroughly cared for by the departmental committees. But it ought to be recognized more than is the case to-day that material advantage would come to the School if its officers and students had more frequent occasion to be impressed with the School as an entity; hence every influence which may contribute to impressing the entity of the School upon the University public should be cultivated. Some of these influences may be here specified.

On the part of the students themselves there has been for some years a Graduate Club, which has held meetings about once a month. The Club certainly has performed a useful purpose, but even since its meetings have been held in Brooks House or in the common room of Conant Hall, instead of in the very limited space offered by the room of a member, it has not been successful in enlisting a majority of the students in the School as Club members; and it has not yet led to so natural a result as the formation of a permanent association of the members of the School. Hence, while the School undoubtedly possesses many individual elements of strength, it does not yet possess the strength which comes of union.

The reservation of Conant Hall for Graduate Students has been eminently successful. Not only has the Hall been filled with Graduate Students for the past year, but before the end of March all the rooms but three were bespoken for the present year, and it was necessary to disappoint many late applicants. The attractive common room has been much enjoyed, not only by the occupants of the

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Hall, but also by various clubs and conferences of which the greater number of members were Graduates. It would thus appear that a natural segregation of Graduate Students would take place, if special dormitories were assigned to them; especially if the rooms were simply furnished so that they could be rented at moderate prices, ready for immediate occupation. If a large dormitory of this kind were built near Conant Hall, it would establish that district of Cambridge as the centre of Graduate residence. Of even greater attractiveness would be a Graduate refectory, situated in the same district or between it and the College Yard, where some three hundred men could conveniently have their meals together. This would bring a majority of the School into a natural and visible relation three times a day; if a reading room could be added, so much the better. For the present the establishment of such a refectory might draw away students who could be ill spared from Memorial and Randall Halls, but with the increase in numbers that difficulty will disappear.

In order to give fuller consideration to these and other questions of general import, it was requested that a committee to visit the School should be appointed by the Overseers. This was done, Professor W. W. Goodwin being named as chairman. A meeting of the Committee, represented by four of its members, and of a number of professors interested in graduate teaching was held in the office of the School on April 5, and Conant Hall was visited.

The annual reception for the students of the School for the current year was held on Thursday evening, October 3, in the Faculty Room. Addresses were made by Professor George H. Palmer, on "Specialization," and by Professor Sabine. Professor Paul Clemen, Visiting Professor of German Art, Professor Otto Pfleiderer, of the University of Berlin, and President Eliot also spoke.

W. M. DAVIS, *Acting Dean.*

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## THE DIVINITY SCHOOL.

To the President of the University: —

Sir, — As Dean of the Divinity School I have the honor to present the following report for the year 1906–07.

Professor Peabody's resignation as Dean of the School was deeply regretted by both Faculty and students. During his years of service the School passed through exceptional changes in Faculty and curriculum, and, in the readjustments which were required by these changes, Professor Peabody's wisdom and tact were of utmost value. Moreover, his eminence as writer and speaker, and the esteem in which he is held by members of all denominations, have done much to recommend the School to the larger constituency which its non-denominational character naturally seeks. It is fortunate that, notwithstanding the increasing demands of his work in Sociology, Professor Peabody still retains his connection with the School, to aid the Faculty by his counsel and the students by his wise and inspiring instruction.

The instruction offered by the School during the past year was materially diminished by the absence during the entire year of Professors Emerton and Lyon, and during the second half-year of Professor E. C. Moore. Professor Emerton spent his Sabbatic year abroad, and Professor Lyon was Director of the American School in Palestine. Professor E. C. Moore visited China as a representative of the American Board of Commissioners for Foreign Missions. That a member of our Faculty should have been selected for so important a mission by the American Board, and should also have given theological instruction in the Yale Divinity School, as well as at Harvard, during the first half-year, is a striking indication both of the clearer recognition of the character of our School, and also of changing theological and ecclesiastical conditions in New England.

At the beginning of the academic year it was hoped that this report would chronicle an even more noteworthy sign of change in the same direction by recording the successful issue of negotiations then pending for the removal of Andover Theological Seminary to Cambridge. Although these negotiations are now at a standstill, it is understood that the project has not been abandoned by the Trustees of Andover, and there is still reason to hope for the enlargement of theological

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instruction and the fellowship between teachers and students of both Schools which would result from such neighborly coöperation.

During the discussion aroused by this proposition for removal, it appeared that opinions widely prevail to the effect that our School trains theological scholars rather than parish ministers, that, indeed, many of its graduates never enter the ministry at all, and that, notwithstanding its non-denominational character, nearly all of its students who do enter the ministry are called to Unitarian pulpits. An examination made by the Secretary of the Faculty into the professional history of the students of the School during the past ten years, shows that of the 49 students who have received our degree, 36 are now in charge of parishes, 3 are ordained ministers temporarily without settlement, 4 are teachers in theological positions, 2 are engaged in philanthropic work, 2 are still students, 1 is unaccounted for, and only 1 is in an occupation unrelated to the work of the ministry. Of the 180 who have been students at the School but have not taken our degree, either because they have received the degree of A.M. or Ph.D., or have done less than full work, 114 are now in charge of parishes, 6 are teachers in theological, and 26 in general educational positions, 7 are ministers at present without settlement, 7 are still students, 3 have entered philanthropic work, 4 are unaccounted for, and 13 have entered unrelated occupations. Of the students who have received the degree of the School and entered the active ministry, 65% were called to Unitarian pulpits and 35% to churches of other denominations. Of those connected with the School but not receiving our degree, 38% were called to Unitarian churches and 62% to churches of other denominations. This investigation shows, therefore, that students of the School do become parish ministers, and that their distribution among twelve different denominations is what might be expected in the case of a non-denominational school.

In response to an invitation from the Trustee of the Lowell Institute, our Faculty arranged a course of lectures upon Current Problems in Theology, which were delivered in King's Chapel. This may have suggested to the Proprietors of King's Chapel the arrangement which has since been made by which our Faculty has been given the responsibility of approving the selection of new members of the Board of Trustees, in whose hands the property of the Chapel has been placed, and in certain contingencies of removing the Trustees and appointing others in their stead. In consequence of this arrangement, members of the Faculty have received an invitation, which has been gladly accepted, to coöperate with the minister of King's Chapel in the Sunday afternoon preaching services of the present winter.

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The 40 students enrolled in the year 1906–07 were distributed as follows: —

| | |
|---|---|
| Resident Graduates | 18 |
| Senior Class | 8 |
| Middle Class | 6 |
| Junior Class | 9 |
| Special Students | 4 |
| Total | 40 |

Twenty-nine colleges were represented as follows: —

| | | | |
|---|---|---|---|
| Aberystwyth College, Wales | 1 | University of Michigan | 1 |
| Amherst College | 1 | Middlebury College | 1 |
| Brown University | 2 | University of North Carolina | 1 |
| University of Buffalo | 1 | Ohio Wesleyan University | 1 |
| University of California | 2 | Oxford University, England | 1 |
| Central College | 1 | University of Rochester | 1 |
| College of Charleston | 1 | University of South California | 1 |
| Colgate University | 1 | Tufts College | 1 |
| Cornell University | 1 | Union College, Ky. | 1 |
| Dartmouth College | 3 | Vanderbilt University | 1 |
| De Pauw University | 1 | Williams College | 1 |
| Dickinson College | 1 | University of Wooster | 1 |
| Drake University | 1 | Yale University | 1 |
| Harvard University | 13 | | 45 |
| Kansas Wesleyan University | 1 | Counted more than once | 8 |
| Kolozsvár University, Hungary | 1 | | 37 |

Thirteen theological seminaries were represented as follows: —

| | |
|---|---|
| Andover Theological Seminary | 2 |
| Bangor Theological Seminary | 2 |
| Berkeley Bible Seminary | 1 |
| Boston University | 2 |
| Concordia Theological Seminary | 1 |
| Harvard University | 3 |
| Theological School of Kolozsvár, Hungary | 1 |
| Manchester College, England | 1 |
| Nashotah House | 1 |
| Newton Theological Institution | 2 |
| Pacific Theological Seminary | 1 |
| Rochester Theological Seminary | 1 |
| Southern Baptist Theological Seminary | 1 |
| | 19 |
| Counted more than once | 1 |
| | 18 |

The interchange of instruction between the Faculty of the School and the Faculty of Arts and Sciences indicates the extent of the contribution made by the Divinity School to the general work of the

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University. This interchange between the two Faculties in 1906–07 was as follows: —

Divinity students taking courses offered by the Faculty of Arts and Sciences, 1906–07: —

| | | |
|---|---|---|
| Semitic | 3 | elections. |
| English | 1 | " |
| German | 1 | " |
| Economics | 14 | " |
| Philosophy | 25 | " |
| Social Ethics | 11 | " |
| Music | 1 | " |
| | 56 | |

Non-Divinity students electing courses offered by the Divinity School, 1906–07: —

| | | |
|---|---|---|
| Old Testament | 19 | elections. |
| New Testament | 11 | " |
| Church History | 41 | " |
| History of Religions | 53 | " |
| Theology | 8 | " |
| Ethics | 170 | " |
| | 302 | " |

Seven members of the School received the degree of S.T.B., five the degree of A.M., and two the degree of Ph.D.

The degree of A.M. was also conferred upon one person for work done in the Divinity School in 1905–06.

The report of last year's Summer School is distinctly encouraging. In accordance with the arrangement entered upon two years ago, the lectures were devoted to the problems of Social Ethics. The attendance was larger than at any previous session of the School, except the first, and the interest of the students was well maintained. That 103 persons, the great majority of whom were in charge of parishes, should have been willing to devote vacation time, at considerable expense, to lectures of academic character shows that the ideal of a learned ministry is still persuasive.

The nine sessions of the School have had the following record of attendance: —

| | Men. | Women. | Total. |
|---|---|---|---|
| 1899 | 96 | 9 | 105 |
| 1900 | 52 | 2 | 54 |
| 1901 | 84 | 5 | 89 |
| 1902 | 74 | 4 | 78 |
| 1903 | 54 | 4 | 58 |
| 1904 | 46 | 1 | 47 |
| 1905 | 54 | 7 | 61 |
| 1906 | 59 | 9 | 68 |
| 1907 | 92 | 11 | 103 |
| | 611 | 52 | 663 |

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The distribution by denomination, in the case of ministers attending in the nine years, was as follows: —

| | Orthodox Congregational. | Unitarian Congregational. | Episcopalian. | Universalist. | Baptist. | Presbyterian. | Disciples. | Methodist. | Free Baptist. | Lutheran. | Christian Connection. | German Reformed. | Moravian. | Evangelical Association. | Dutch Reformed. | Jewish. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1899 | 27 | 17 | 16 | 14 | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 1900 | 17 | 6 | 3 | 14 | 6 | .. | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | .. |
| 1901 | 28 | 12 | 11 | 14 | 5 | 2 | .. | 10 | 1 | 1 | .. | .. | .. | .. | .. | .. |
| 1902 | 28 | 7 | 15 | 3 | 5 | 1 | 1 | 8 | 1 | 1 | .. | .. | .. | .. | .. | .. |
| 1903 | 21 | 4 | 10 | 5 | .. | 5 | 3 | 1 | 1 | .. | 1 | 1 | 1 | .. | .. | .. |
| 1904 | 13 | 6 | 11 | 1 | 7 | 1 | .. | 3 | 1 | .. | 1 | .. | .. | 1 | .. | .. |
| 1905 | 7 | 4 | 14 | 3 | 5 | 1 | 5 | 9 | .. | .. | 1 | 3 | .. | .. | 1 | .. |
| 1906 | 8 | 7 | 16 | 2 | 3 | 3 | 2 | 5 | .. | 1 | .. | 5 | .. | .. | .. | 1 |
| 1907 | 13 | 12 | 17 | 9 | 5 | 5 | 3 | 15 | .. | 3 | .. | 2 | .. | .. | .. | .. |
| | 162 | 75 | 113 | 65 | 41 | 21 | 17 | 54 | 4 | 6 | 3 | 11 | 1 | 1 | 1 | 1 |

The following is a list of the Courses of Instruction offered in the School in the year 1906–07. With each course is a statement of the number of students electing it from the Divinity School, the Graduate School of Arts and Sciences, Harvard College, the Lawrence Scientific School, the Medical School, and Radcliffe College. A list of the lectures of the Summer School and a list of the lectures delivered by the Faculty in the Lowell Institute course in King's Chapel are appended to the list of regular courses.

## COURSES OF INSTRUCTION.

### INTRODUCTION TO THE STUDY OF THEOLOGY.

Professor G. F. Moore. — Eight lectures. *First half-year.* (Not counted for a degree.) 2 Div.

### OLD TESTAMENT.

1. Dr. Haynes. — Hebrew. Morphology. Explanation of parts of Genesis and of the Book of Psalms. 3 Col.

2. Professor Toy. — Hebrew (second course). — Syntax. Interpretation of parts of the Prophets and the Poetical Books. Text-criticism. 1 Div., 1 Col.

4. Professor G. F. Moore. — History of Israel, political and social, till the capture of Jerusalem by the Romans. 6 Div., 9 Col.

5. Professor G. F. Moore. — History of Jewish Literature from the earliest times to 200 A.D. 5 Div., 3 Col.

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6. Professor TOY. — History of the Hebrew Religion, with comparison of other Semitic religions. 7 Div., 1 Gr., 1 Col.

7. Dr. HAYNES. — Assyrian. 1 Col.

20. Research courses. The instructors will arrange and supervise for any properly prepared student a line of special study on such topic as may be agreed on. 1 Div.

## NEW TESTAMENT.

2. Professor ROPES. — Introduction to the Study of the New Testament. *First half-year:* The origin and early history of the New Testament writings. *Second half-year:* The teaching of Jesus Christ, and the theological and ethical ideas of the New Testament writers.
As full course, 6 Div., 2 Gr., 6 Col. As half-course, 2 Div.

6 1/hf. Professor ROPES. — The Gospel and Epistles of John. Selected portions. *Half-course.* 2 Div.

7 2/hf. Professor ROPES. — The Apostolic Age. Study of the Acts of the Apostles. *Half-course.* 4 Div., 1 Rad.

8. Professor ROPES. — The Epistles of Paul. Selected portions. 2 Div., 2 Rad.

15 1/hf. Professor FENN. — The Theological Method of Jesus and Paul. *Half-course.* 3 Div.

## CHURCH HISTORY.

4 1/hf. Professor E. C. MOORE. — The Church since the Reformation. *Half-course.* 4 Div., 41 Col.

10 1/hf. Professor PLATNER (Andover Theological Seminary). — Christian Institutions, historically and comparatively considered. 7 Div.

## HISTORY OF RELIGIONS.

1 1/hf. Professor G. F. MOORE. — Introduction to the Study of Religions. *Half-course.* 9 Div., 3 Gr., 9 Col., 1 Sc.

2. Professor G. F. MOORE. — History of Religions in Outline.
As full course, 4 Div., 3 Gr., 36 Col., 1 Med. As half-course, 3 Div.

## THEOLOGY.

1 1/hf. Professor FENN. — Theism. *Half-course.* 9 Div., 1 Gr., 1 Col.

2 1/hf. Professor FENN. — Outlines of Systematic Theology. *Half-course.* 12 Div.

3 1/hf. Professor FENN. — New England Theology. *Half-course.* 3 Div.

5 2/hf. Professor FENN. — The History and Philosophy of Christian Mysticism. *Half-course.* 8 Div.

6 1/hf. Professor E. C. MOORE. — The History of Christian Thought since Kant, including a discussion of the present state and tendencies of theological thought. *Half-course.* 8 Div., 2 Gr., 4 Col.

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## ETHICS.

1. Professor PEABODY, assisted by Dr. ROGERS. — Social Ethics. — The Problems of Poor Relief, the Family, Temperance, and various phases of the Labor Question, in the light of ethical theory. — Lectures, special researches, and prescribed reading.
As full course, 8 Div., 6 Gr., 157 Col. As half-course, 4 Div.

20*a*. Professor PEABODY. — Seminary of Social Ethics. — Subject for the year: Christian Ethics and Modern Life.
As full course, 16 Div., 3 Gr., 1 Rad. As half-course, 1 Div.

20*b*. Professor PEABODY. — The instructor directs special researches of competent students in the Ethics of the Social Questions.
2 Div., 1 Gr., 1 Col., 1 Rad.

## HOMILETICS AND PASTORAL CARE.

1 ½*hf*. Professor PEABODY. — Preaching and the Conduct of Worship. *Half-course.* 9 Div.

2. Professors PEABODY, E. C. MOORE, and FENN. — Preaching. Each student prepares eight sermons during the year, of which some are preached before the class and criticized by students and instructor [in Appleton Chapel], and the rest are criticized by the instructor privately. Students in this course should already have taken Homiletics 1 or its equivalent. The course may be taken a second year with the permission of the instructors and may be entered at the beginning of the second half-year.
As full course, 12 Div. As half-course, 4 Div.

## ELOCUTION.

1. Mr. WILLARD. — Voice Training and the Elements of Form in Speaking. Preparatory to Course 2. (Not counted for a degree.) 5 Div.

2 *hf*. Asst. Professor WINTER and Mr. WILLARD. — Sermon Delivery, Scripture Reading, Oral Discussion. *Half-course.* 10 Div.

# SUMMER SCHOOL OF THEOLOGY.

President C. W. ELIOT. — One lecture: Introductory address.

Professor F. G. PEABODY. — Six lectures: The Approach to the Social Question.

Professor L. B. PATON. — Three lectures: The Sociological Uses of the Old Testament.

Professor J. H. ROPES. — Three lectures: The Application of New Testament Teaching to Sociology.

Professor SHAILER MATHEWS. — Eight lectures: The Social Content of Christian Doctrine.

Professor F. W. TAUSSIG. — Three lectures: Some Fundamental Questions as to Private Property and Socialism.

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Professor C. J. BULLOCK. — Three lectures: The Ministry and the Labor Question.

Professor JOSIAH ROYCE. — Four lectures: Loyalty as an Ethical Principle.

Professor J. B. AMES. — Two lectures: Marriage and Divorce from the Lawyer's Point of View.

Professor JEREMIAH SMITH. — Two lectures: Legal Aspects of the Labor Question.

Mr. R. A. WOODS. — Four lectures: Women and Children in Industrial Life.

Dr. J. R. BRACKETT. — Four lectures: Leading Principles of Scientific Charity.

Dr. D. C. ROGERS. — Two lectures: Problems in Criminology.

## KING'S CHAPEL LECTURES.

Professor F. G. PEABODY. — Two lectures: The Study of Theology and the Preaching of Religion.

Professor G. F. MOORE. — Three lectures: Foreign Influences on the Religion of Israel.

Professor C. H. TOY. — Two lectures: The Present State of Old Testament Criticism.

Professor E. C. MOORE. — Two lectures: The Absoluteness of Christianity and the History of Religion.

Professor W. W. FENN. — Two lectures: The Authority Concept in Christianity.

Professor J. H. ROPES. — Two lectures: The Historical Criticism of the Gospels.

The Librarian of the School reports as follows on the condition of the Library for the year ending July 31, 1907. There were added to the Library 344 volumes and 10 pamphlets by purchase, 229 volumes and 159 pamphlets by gift. August 1, 1907, there were in the Library 36,360 volumes and 9,505 pamphlets. During the year 1,141 titles were catalogued in the author catalogue and 381 titles in the subject catalogue. There were borrowed from the stack for home use 1,155 volumes, from the stack for hall use 557 volumes, from the reserved books for overnight use 486 volumes.

It is a pleasure to record the placing upon the walls of our Chapel of tablets in memory of Henry Ware, Jr., and of Theodore Parker. It is happily significant of the spirit of the School that it should thus simultaneously honor two men who, in the second quarter of the last century, represented contrasted tendencies in the religious thought of New England. These tablets, with the others which dignify and beautify our Chapel, are among the noblest educative agencies of the School.

W. W. FENN, *Dean.*

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# THE LAW SCHOOL.

To the President of the University: —

Sir, — I have the honor of presenting my report upon the Law School for the academic year 1906–07.

The table below exhibits the growth of the School during the last thirty-eight years, in the number of students, the number and

| Year. | Whole No. of Students. | Total of College Graduates. | Harvard Graduates. | Graduates of other Colleges. | Non-Graduates. | Per cent. of College Graduates. | No. of Colleges represented. |
|---|---|---|---|---|---|---|---|
| 1870–71 | 165 | 77 | 27 | 50 | 88 | 47 | 27 |
| 1871–72 | 138 | 70 | 34 | 36 | 68 | 51 | 25 |
| 1872–73 | 117 | 66 | 34 | 32 | 51 | 56 | 25 |
| 1873–74 | 141 | 86 | 49 | 37 | 55 | 61 | 25 |
| 1874–75 | 144 | 82 | 63 | 19 | 62 | 57 | 18 |
| 1875–76 | 173 | 93 | 60 | 33 | 80 | 54 | 25 |
| 1876–77 | 199 | 116 | 74 | 42 | 83 | 58 | 30 |
| 1877–78 | 196 | 121 | 80 | 41 | 75 | 62 | 30 |
| 1878–79 | 169 | 109 | 71 | 38 | 60 | 64 | 24 |
| 1879–80 | 177 | 118 | 90 | 28 | 59 | 66 | 20 |
| 1880–81 | 161 | 112 | 82 | 30 | 49 | 70 | 19 |
| 1881–82 | 161 | 99 | 66 | 33 | 62 | 61 | 22 |
| 1882–83 | 138 | 93 | 58 | 35 | 45 | 67 | 32 |
| 1883–84 | 150 | 105 | 75 | 30 | 45 | 70 | 25 |
| 1884–85 | 156 | 122 | 85 | 37 | 34 | 78 | 31 |
| 1885–86 | 158 | 122 | 83 | 39 | 36 | 77 | 29 |
| 1886–87 | 188 | 143 | 88 | 55 | 45 | 76 | 34 |
| 1887–88 | 225 | 158 | 102 | 56 | 67 | 70 | 32 |
| 1888–89 | 225 | 158 | 105 | 53 | 67 | 70 | 32 |
| 1889–90 | 262 | 189 | 122 | 67 | 73 | 72 | 41 |
| 1890–91 | 285 | 200 | 135 | 65 | 85 | 70 | 33 |
| 1891–92 | 370 | 257 | 140 | 117 | 113 | 69 | 48 |
| 1892–93 | 405 | 266 | 132 | 134 | 139 | 66 | 54 |
| 1893–94 | 367 | 279 | 129 | 150 | 88 | 76 | 56 |
| 1894–95 | 413 | 310 | 139 | 171 | 103 | 75 | 74 |
| 1895–96 | 475 | 380 | 171 | 209 | 95 | 80 | 82 |
| 1896–97 | 490 | 408 | 186 | 222 | 82 | 83 | 82 |
| 1897–98 | 551 | 490 | 229 | 261 | 61 | 89 | 77 |
| 1898–99 | 564 | 503 | 212 | 291 | 61 | 89 | 78 |
| 1899–00 | 613 | 557 | 236 | 321 | 56 | 91 | 67 |
| 1900–01 | 655 | 605 | 252 | 353 | 50 | 92 | 83 |
| 1901–02 | 633 | 584 | 247 | 337 | 49 | 92 | 92 |
| 1902–03 | 644 | 600 | 241 | 359 | 44 | 93 | 94 |
| 1903–04 | 743 | 695 | 272 | 423 | 48 | 94 | 111 |
| 1904–05 | 766 | 711 | 286 | 425 | 55* | 93 | 114 |
| 1905–06 | 727 | 716 | 295 | 421 | 11 | 98 | 118 |
| 1906–07 | 705 | 696 | 260 | 436 | 9 | 99 | 126 |
| 1907–08 | 719 | 712 | 276* | 436* | 7 | 99 | 122 |

* 34 Harvard Seniors and 1 Dartmouth Senior who have completed the full College course, but have not received their diplomas, are reckoned as graduates. Prior to 1905–06 Harvard Seniors were not reckoned as graduates but as non-graduates.

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percentage of college graduates, and in the number of colleges represented by their graduates. The figures for the current year will be slightly increased by later entries.

The table on pages 154, 155 gives the courses of study and instruction during the year, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

During the twelve months from August 1, 1906, to August 1, 1907, 6,298 bound volumes and 1,183 pamphlets were added to the library. The library contained August 1, 1907, about 102,826 volumes and about 11,185 pamphlets.

To the Harvard Law School Association the School is indebted for the most interesting gift of the past year, two excellent oil portraits of Professor Smith and Professor Gray, painted by Mr. Vinton. It is proposed to place in Langdell Hall the portrait of Professor Langdell and those of his colleagues, and to keep in Austin Hall the portraits of Judge Story and the other professors who were called to the School before 1870. It is much to be regretted that it seems impossible to procure a portrait of Judge Story's first colleague, the brilliant young Professor Ashmun.

The collection of portraits of judges and lawyers has been increased, during the past year, by two oil portraits, thirty-nine engravings, twenty-nine photographs and one pencil sketch. The portraits now hanging (or ready to hang) on the walls of Austin Hall and Langdell Hall number 473, namely, 25 oil paintings, 290 engravings, 25 etchings, 107 photographs, one water color, three pencil sketches, 19 lithographs and three bas-reliefs. There are also 54 trial scenes and views of law buildings.

By the will of Mrs. Langdell the School is to receive $25,000 to found two scholarships to be known as the "Langdell Scholarships and to be given only to worthy men of small means and of the highest rank and character."

Another scholarship, the "Samuel Phillips Prescott Fay, 1798, Fund and Scholarship," has been established in the School by an anonymous gift of $5000. The income of this fund is to be applied each year, first, to the expense of preparing and issuing a diploma in memory of Jonathan Fay, A.B. 1778 and A.M., and of his son, Samuel Phillips Prescott Fay, A.B. 1798, A.M. and overseer, "to be given to the member of the graduating class of the Law School who, in the judgment of the Law Faculty, has during his three years shown the greatest ability"; secondly, for the benefit of "such

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| Instructors. | Studies and Text-books. | Exercises per week. | Number of students examined. |
|---|---|---|---|
| | **First Year.** | | |
| Prof. Williston<br>Asst. Prof. Wyman | Contracts. Williston's Cases on Contracts | 3 | 258 |
| Prof. Wambaugh. Mr. Dutch | Property. Gray's Cases on Property, vols. 1, 2 | 2 | 253 |
| Prof. Smith | Torts. Cases on Torts: Ames, vol. 1 (2d ed.), Smith, vol. 2 | 2 | 249 |
| Prof. Beale | Criminal Law and Procedure. Beale's Cases on Criminal Law | 2 | 247 |
| Prof. Ames | Civil Procedure at Common Law. Ames's Cases on Pleading | 1 | 250 |
| | **Second Year.** | | |
| Prof. Wambaugh | Agency. Wambaugh's Cases on Agency | 2 | 126 |
| Prof. Brannan and Mr. Miller | Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and the Negotiable Instruments Law | 2 | 6 |
| Prof. Gray | Evidence. Thayer's Cases on Evidence (2d ed.) | 2 | 206 |
| Asst. Prof. Warren | Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1 | 2 | 210 |
| Asst. Prof. Warren | Property. Gray's Cases on Property, vols. 3, 4 | 2 | 208 |
| Prof. Williston | Sales of Personal Property. Williston's Cases on Sales | 2 | 122 |
| Prof. Ames | Trusts. Ames's Cases on Trusts (2d ed.) | 2 | 199 |
| Asst. Prof. Wyman | Carriers. Beale and Wyman's Cases on Public Service Companies | 1 | 4 |
| Prof. Beale | Damages. Beale's Cases on Damages | 1 | 2 |
| Prof. Wambaugh | Insurance. Wambaugh's Cases on Insurance | 1 | 1 |
| Prof. Smith | Persons. Smith's Cases on Persons | 1 | 9 |

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| | Third Year. | | |
|---|---|---|---|
| Prof. Beale | Conflict of Laws. Beale's Cases on the Conflict of Laws | 2 | 180 |
| Prof. Wambaugh | Constitutional Law. Thayer's Cases on Constitutional Law | 2 | 64 |
| Asst. Prof. Warren | Corporations. Smith's Cases on Private Corporations (2d ed.) | 2 | 204 |
| Prof. Ames | Partnership. Ames's Cases on Partnership | 2 | 22 |
| Prof. Gray | Property. Gray's Cases on Property, vols. 5, 6 | 2 | 125 |
| Asst. Prof. Wyman | Suretyship and Mortgage. Ames's Cases on Suretyship. Wyman's Cases on Mortgage | 2 | 177 |
| Prof. Wambaugh | Agency. Wambaugh's Cases on Agency | 2 | 44 |
| Prof. Brannan and Mr. Miller | Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and the Negotiable Instruments Law | 2 | 89 |
| Prof. Gray | Evidence. Thayer's Cases on Evidence | 2 | 5 |
| Asst. Prof. Warren | Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1 | 2 | 2 |
| Asst. Prof. Warren | Property II. Gray's Cases on Property, vols. 3, 4 | 2 | 14 |
| Prof. Williston | Sales of Personal Property. Williston's Cases on Sales | 2 | 21 |
| Prof. Ames | Trusts. Ames's Cases on Trusts (2d ed.) | 2 | 8 |
| Prof. Williston | Bankruptcy. Williston's Cases on Bankruptcy | 1 | 57 |
| Asst. Prof. Wyman | Carriers. Beale and Wyman's Cases on Public Service Companies | 1 | 47 |
| Prof. Beale | Damages. Beale's Cases on Damages | 1 | 25 |
| Mr. Dutch | Equity III. Ames's Cases in Equity Jurisdiction, vol. 2 | 1 | 43 |
| Prof. Wambaugh | Insurance. Wambaugh's Cases on Insurance | 1 | 25 |
| Prof. Smith | Persons. Smith's Cases on Persons | 1 | 31 |

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| Instructors. | Studies and Text-books. | Exercises per week. | Number of students examined. |
|---|---|---|---|
| | **First Year.** | | |
| Prof. Williston<br>Asst. Prof. Wyman | Contracts. Williston's Cases on Contracts | 3 | 258 |
| Prof. Wambaugh. Mr. Dutch | Property. Gray's Cases on Property, vols. 1, 2 | 2 | 253 |
| Prof. Smith | Torts. Cases on Torts: Ames, vol. 1 (2d ed.), Smith, vol. 2 | 2 | 249 |
| Prof. Beale | Criminal Law and Procedure. Beale's Cases on Criminal Law | 2 | 247 |
| Prof. Ames | Civil Procedure at Common Law. Ames's Cases on Pleading | 1 | 250 |
| | **Second Year.** | | |
| Prof. Wambaugh | Agency. Wambaugh's Cases on Agency | 2 | 126 |
| Prof. Brannan and Mr. Miller | Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and the Negotiable Instruments Law | 2 | 6 |
| Prof. Gray | Evidence. Thayer's Cases on Evidence (2d ed.) | 2 | 206 |
| Asst. Prof. Warren | Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1 | 2 | 210 |
| Asst. Prof. Warren | Property. Gray's Cases on Property, vols. 3, 4 | 2 | 208 |
| Prof. Williston | Sales of Personal Property. Williston's Cases on Sales | 2 | 122 |
| Prof. Ames | Trusts. Ames's Cases on Trusts (2d ed.) | 2 | 199 |
| Asst. Prof. Wyman | Carriers. Beale and Wyman's Cases on Public Service Companies | 1 | 4 |
| Prof. Beale | Damages. Beale's Cases on Damages | 1 | 2 |
| Prof. Wambaugh | Insurance. Wambaugh's Cases on Insurance | 1 | 1 |
| Prof. Smith | Persons. Smith's Cases on Persons | 1 | 9 |

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| | Third Year. | | |
|---|---|---|---|
| Prof. Beale | Conflict of Laws. Beale's Cases on the Conflict of Laws | 2 | 180 |
| Prof. Wambaugh | Constitutional Law. Thayer's Cases on Constitutional Law | 2 | 64 |
| Asst. Prof. Warren | Corporations. Smith's Cases on Private Corporations (2d ed.) | 2 | 204 |
| Prof. Ames | Partnership. Ames's Cases on Partnership | 2 | 22 |
| Prof. Gray | Property. Gray's Cases on Property, vols. 5, 6 | 2 | 125 |
| Asst. Prof. Wyman | Suretyship and Mortgage. Ames's Cases on Suretyship. Wyman's Cases on Mortgage | 2 | 177 |
| Prof. Wambaugh | Agency. Wambaugh's Cases on Agency | 2 | 44 |
| Prof. Brannan and Mr. Miller | Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and the Negotiable Instruments Law | 2 | 89 |
| Prof. Gray | Evidence. Thayer's Cases on Evidence | 2 | 5 |
| Asst. Prof. Warren | Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1 | 2 | 2 |
| Asst. Prof. Warren | Property II. Gray's Cases on Property, vols. 3, 4 | 2 | 14 |
| Prof. Williston | Sales of Personal Property. Williston's Cases on Sales | 2 | 21 |
| Prof. Ames | Trusts. Ames's Cases on Trusts (2d ed.) | 2 | 8 |
| Prof. Williston | Bankruptcy. Williston's Cases on Bankruptcy | 1 | 57 |
| Asst. Prof. Wyman | Carriers. Beale and Wyman's Cases on Public Service Companies | 1 | 47 |
| Prof. Beale | Damages. Beale's Cases on Damages | 1 | 25 |
| Mr. Dutch | Equity III. Ames's Cases in Equity Jurisdiction, vol. 2 | 1 | 43 |
| Prof. Wambaugh | Insurance. Wambaugh's Cases on Insurance | 1 | 25 |
| Prof. Smith | Persons. Smith's Cases on Persons | 1 | 31 |

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student in the Law School as the Faculty of that School shall consider most worthy of assistance provided he has finished at least one full year's course and they are satisfied of his intention to complete the three-year course, but this provision shall not prevent the payment being made to a third-year student if deemed worthy as aforesaid." This diploma and scholarship are restricted to students both of whose parents have been born citizens of the United States, but are to be open to women, if, at any time, women are admitted as students.

It is encouraging that the first scholarship exclusively for the Law School, the George Fisher Scholarship, established only a year ago, should be so soon followed by these new gifts for a similar purpose.

The lecture rooms in Langdell Hall have been used for some weeks. The books are installed, and the entire building is now ready for occupation. In some respects the convenience of the School has been sacrificed to architectural considerations, but the two buildings will, for a dozen years at least, give dignified, attractive and ample accommodations for all the needs of the School.

JAMES BARR AMES, *Dean.*

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# THE FACULTY OF MEDICINE.

To the President of the University: —

Sir, — As Dean of the Faculty of Medicine I have the honor to submit the following report for the academic year 1906–07.

By a vote of the Faculty the doors of the School were opened last year to persons not candidates for the degree of Doctor of Medicine. Several letters of inquiry were received as to the privileges granted to students under this new rule, and the first special student was admitted in the autumn of 1906 and spent some time in the Bacteriological Laboratory.

A Laboratory of Surgical Research, for special students, was established, and several investigations have been made during the year.

The instruction in Psychiatry has been placed under the Department of Neurology.

In October, the History of the School, edited by Professor Ernst, was published, and in the spring the account of the Dedication was issued under the same editorship.

During the year 92 men were recommended to the Corporation for degrees as follows: —

| | | |
|---|---|---|
| Medical School | For the degree of M.D. (February) | 7 |
| | " " " (June) | 48 |
| | " " " *cum laude* (June) | 16 |
| Dental School | For the degree of D.M.D. (February) | 0 |
| | " " " (June) | 19 |
| | " " " *cum laude* (June) | 2 |
| | Total | 92 |

The time for making the choice of electives for the fourth year was changed from the first day of the term to September 15. This change was made in order that the work of the School, so far as the fourth class is concerned, should begin more promptly.

By invitation, the National Academy of Sciences held their autumn meeting, 1906, in the buildings, and in August, 1907, the Seventh International Zoölogical Congress also held their meetings here.

During the winter a course of thirty-six free public lectures was given at the Medical School by various instructors connected with

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the Medical and Dental Schools. These lectures were given Saturday evenings and Sunday afternoons, beginning January 12 and ending May 12. The average attendance at the evening lectures was 127, and at the afternoon lectures 259. The smallest number at any lecture was 45; the largest, 400. The object of the course was to instruct the public regarding a wide range of subjects, and to give the instruction in a practical way, and one which a non-professional audience could understand.

WILLIAM L. RICHARDSON, *Dean.*

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# THE MEDICAL SCHOOL.

To the President of the University: —

Sir, — As Dean of the Medical School I have the honor to submit the following report for the academic year 1906–07.

The Administrative Board was constituted as follows: Drs. W. L. Richardson, J. C. Warren, F. C. Shattuck, W. F. Whitney, C. M. Green, C. Harrington, F. B. Mallory, W. B. Cannon, and J. Warren.

A free course of lectures on "The Classical Symptoms of Hysteria" was given in the fall by Professor Pierre Janet, of Paris. The lectures were open to all teachers and students of medical schools in Boston, to members of the medical profession, and to teachers and students of psychology.

*Buildings.* — The following changes and alterations have been made in the buildings during the past year: —

*Building A.* — The floor of the museum has been cleaned and waxed and the cases repainted. Rugs have been purchased for the dean's office and the faculty room. In the latter, suitable tablets have been placed on the portraits, and the floor has been waxed and polished. The floor of the committee room has also been stained, and the furniture thoroughly renovated. A periodical stand and a book-case have been placed in the students' room for the students' library. It is intended to add more shelving and window seats to this room, and also to fit up the alumni room as a stack room and reading room. A room for the scrub women and another for storage have been provided in the basement by the transfer of the course on bandaging to Building B. An epidiascope has been ordered for the amphitheatre in this building.

*Building B.* — In the anatomical wing of Building B, the floors of the dissecting rooms have been asphalted to make them water tight, and partitions have been built on the second and third floors to cut off the dissecting rooms from the main hall and staircase. An electric heater and boiler have been placed in the macerating room. In the other wing of the building, on the top floor, an unfinished room has been fitted up for the assistants in the Department of Comparative Anatomy. On the second floor four wall cases have been placed to display advantageously the collection of specimens of this department. On the ground floor a laboratory has been fitted up for the

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Departments of Otology and Laryngology, and two rooms here will be assigned to the course on surgical bandaging. Two large tanks have been built in the animal room.

*Building C.* — In Building C, the animal rooms and cabins have been asphalted to make them water tight. In the chemical wing a distilling apparatus has been installed, and private laboratories have been fitted up for Professors Folin and Christian and for the assistants in the Department of Theory and Practice.

*Building D.* — In Building D, six unfinished rooms have been equipped as research laboratories.

*Building E.* — In Building E, a library has been fitted up for the Surgical Department, and it is proposed to carry a staircase from the top floor to the roof. The floors of the animal rooms in this building have been asphalted.

In addition to these details a great deal of carpentering and engineering work has been done in order to fit up the private rooms and general laboratories in the various buildings, as they were only partially equipped when the buildings were first occupied.

An automobile and carriage shelter is in process of construction behind Building D, and the roadway has been continued behind Building B to connect with Van Dyke Street. The bank behind this building has been graded and planted with shrubs. Shrubs also have been planted at the corners of the wings of each building and at the corner of Van Dyke Street and Huntington Avenue. Van Dyke Street in front of Building A has been widened from twelve to sixteen feet.

*Libraries.* — During the past year the libraries of the various departments of the School have been placed under the general direction of a Committee on Library. This has promoted economy in the purchase of periodicals and books, and uniformity in administration. Librarians have been appointed for the buildings in which the library room is used in common. In addition to their routine library work the librarians also act as secretaries to the heads of departments. Two of the libraries have been named, — one, the "Anatomical Library," and the other, the "Bowditch Library."

The total number of books, bound periodicals, and society publications was, July 31, 1907, 12,788; and of pamphlets, 23,820.

*Anatomy.* — Professor Dwight has devoted much time to the arrangement in the Museum of the specimens of general osteology and to those of variations of bones.

During the past year much use has been made of the X-ray in the study of variations. Many hands and feet were X-rayed, and subse-

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quently carefully examined to investigate the relations of the skiagraph to actual conditions. Two bodies with persistent stylo-hyoid bars, which had become more or less ossified (one nearly completely), were recognized and X-rayed before dissection was finished. It is thought that this has not been done before.

Dr. John Warren, in the intervals of teaching and executive duties, has added to his series of models showing the development of the paraphysis and of the pineal region. He has completed the models of *lacerta murilis* and of *chrysemis marginata*.

The following publications have been issued: —

The description of the skeleton, including the joints, and that of the gastro-pulmonary system and of the accessory organs of nutrition. By Professor THOMAS DWIGHT. *Human Anatomy*, J. B. Lippincott Co.

Referat über die anatomische Literatur Amerikas für die Jahre 1902–3–4. By Dr. JOHN WARREN. *Ergebnisse der Anatomie und Entwickelungsgeschichte*, 1905, Bd. XV, 1906.

The examination and the surgery of the upper end of the oesophagus. By Dr. H. P. MOSHER. *Publications of the Massachusetts General Hospital*, Vol. I, No. 3, June, 1907.

The following papers represent work done under the auspices of the Department of Anatomy: —

The cause of so-called habitual lateral curvature of the spine. By Dr. MAX BÖHM. *Boston Medical and Surgical Journal*, Vol. 155, No. 21, November 22, 1906.

The so-called "Ochsner Muscle" of the duodenum. By Dr. WALTER M. BOOTHBY. *Boston Medical and Surgical Journal*, Vol. 157, No. 3, July 18, 1907, pp. 80–81.

*Comparative Anatomy.* — Work in Comparative Anatomy proper has been initiated as a consequence of the appointment of Dr. Leonard W. Williams as Instructor in Comparative Anatomy, dating from the mid-year. A plan for a collection of comparative anatomical preparations has been formulated. For the embryological collection twenty-two types of vertebrates have been selected. It is proposed to make a series of preparations illustrating the adult anatomy of these twenty-two types. Upon this special work Dr. Williams has been steadily engaged, and a satisfactory beginning has already been accomplished. The specimens will be placed in cabinets in the hallway adjoining the rooms used for the elementary work, so that they can be readily examined by the students on their way to and from the laboratory. Much care has been used in drawing up the scheme for these new collections and we are specially

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indebted to Professor C. F. W. McClure for valuable advice in regard to the best methods. The work has been so arranged that the preparations which are now making will be chiefly such as will be helpful in connection with the instruction for the first-year medical students. It is expected that the collection will steadily grow and become with each year of greater value, not only to this department, but to all the other laboratories in the School.

A most important advantage is the establishment of the anatomical library, for the common use of the Departments of Anatomy and Comparative Anatomy. The books belonging to the School and pertaining to these two departments have been brought together. A considerable number of journals, text-books, scientific memoirs, and a collection of some eight thousand pamphlets have been deposited in the library by Professor Minot. Thirty-nine journals are now subscribed for by the School and placed regularly in this library. The advantage for both the students and instructors of the new library can hardly be overestimated.

Sixty-nine new series have been added to the embryological collection during the year. There has also been received an exceptionally fine set of series of sections of Axoloth eggs, specially prepared for the permanent collection by Mr. J. W. Jenkinson of Oxford, England. They illustrate the maturation, impregnation, and early segmentation stages, and strengthen the collection where it is weakest.

Dr. R. J. Terry, Professor of Anatomy at Washington University, St. Louis, on leave of absence for a year, took a Teaching Fellowship. His work both in teaching and in research proved extremely valuable. He contributed many suggestions for the improvement of the instruction, and practically completed three original investigations. The first and most extended was on the development of the pineal region of the brain in teleosts; the second, on the neuroglia in fishes; the third, on the embryonic skull of the cat, based on a fine model prepared according to Born's wax plate method under Dr. Terry's direction by three first-year students, G. D. Cutler, I. Gerber, and R. D. Leonard.

The following publications have been issued: —

The segmental flexures of the notochord. By Professor C. S. Minot. *Anatomical Record*, Vol. I, pp. 42–50.

The problem of age, growth, and death. Based on lectures before the Lowell Institute, March, 1907. By Professor C. S. Minot. Published in *Popular Science Monthly*.

A neuroglia syncytium in Batrachus (Opsanus tau). By Professor R. J. Terry. *Anat. Anzeiger*, Vol. XXXI, pp. 27–30.

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The stomach of the lobster and the food of larval lobsters. By Dr. L. W. WILLIAMS. *Report of the Commissioners of Inland Fisheries of Rhode Island*, 1907, pp. 153–180, 9 pls.

A list of Rhode Island Copepoda, Phyllopoda, and Ostracoda, with new species of Copepoda. By Dr. L. W. WILLIAMS. *Report of the Commissioners of Inland Fisheries of Rhode Island*, 1907, pp. 69–79, 3 pls.

The structure of cilia, especially in Gastropod Molluscs. By Dr. L. W. WILLIAMS. *American Naturalist*, Vol. XLI, 1907, pp. 545–551, 2 figs.

The significance of the grasping antennae of Harpacticord Copepods. By Dr. L. W. WILLIAMS. *Science*, Vol. XXV, 1907, pp. 225–226.

*Physiology.* — During the past year several changes were made in the teaching of Physiology. The laboratory experiments were rearranged in such order that the student learns first of what activity an organ or tissue is capable, next how certain factors condition or modify that activity, and finally what may be the effect of the activity. Where possible, experiments combining physiological training and the use of instruments valuable for clinical investigation were introduced. The course was also modified so as to give students extra time for reading, for the repetition of experiments not properly performed, and for special work. In the rearrangement of the instruction the Department of Biological Chemistry was consulted, and, so far as possible, the courses in Physiology and in Biological Chemistry were coördinated.

Numerous investigations have been carried on in the laboratory during the year, and the following have been completed by members of the department: —

The motor activities of the stomach and small intestine after splanchnic and vagus section. By Professor W. B. CANNON. *American Journal of Physiology*, 1906, Vol. XVII, pp. 429–442.

Oesophageal peristalsis after bilateral vagotomy. By Professor W. B. CANNON. *American Journal of Physiology*, 1907, Vol. XIX, pp. 436–444.

Physiologic observations on experimentally produced ileus. By Professor W. B. CANNON and Dr. F. T. MURPHY. *Journal of the American Medical Association*, 1907, Vol. XLIX, pp. 840–843.

A research on the acid control of the pylorus. By Professor W. B. CANNON. Is ready for publication.

Gastric peristalsis in rabbits under normal and some experimental conditions. By Dr. JOHN AUER. *American Journal of Physiology*, 1907, Vol. XVIII, pp. 347–361.

Two papers on a quantitative study of faradic stimulation. By Dr. E. G. MARTIN. Are ready for publication.

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*Comparative Physiology.* — Informal lectures and demonstrations given weekly by Professor Porter during November, December, and January, were doubled by the request of students. Numerous investigations have been carried on and material collected for future study.

A number of improvements have been made in the design of the kymograph and certain other apparatus employed in teaching and research.

Dr. Frederick Haven Pratt, with Professor Porter, has developed a method for the study of the vasomotor relations of peripheral areas.

With this method, it has been discovered that any considerable change in the general blood pressure produces a compensatory change in the diameter of the peripheral vessels.

The following investigations have been published: —

The effect of injuries of the brain on the vasomotor centre. By W. T. PORTER and T. A. STOREY. *The American Journal of Physiology*, 1907, Vol. XVIII, pp. 181–199.

The effect of uniform afferent impulses upon the blood pressure at different levels. By W. T. PORTER. *The American Journal of Physiology*, 1907, Vol. XX. (This paper was read before the Seventh International Congress of Physiologists, held at Heidelberg, August 13 to 16.)

Relation of afferent impulses to vasomotor fatigue. By H. K. MARKS and J. B. SWIFT. *The American Journal of Physiology*, 1907, Vol. XX.

Further data regarding the condition of the vasomotor neurons in "shock." By W. T. PORTER and W. C. QUIMBY. *The American Journal of Physiology*, 1907, Vol. XX.

Vasomotor relations. By W. T. PORTER. A lecture delivered before the Harvey Society in New York and published by them in their annual volume.

*Biological Chemistry.* — During the past year the Department of Biological Chemistry has made further additions to its equipment of apparatus and chemicals, but still greatly needs numerous appliances and chemical preparations. In several cases, however, it has been possible temporarily to supply needed apparatus from the Chemical Laboratory of Harvard College, and with this aid the work of the department has proceeded without material delays.

The laboratory instruction in the regular first-year course in Biological Chemistry has been extended along the lines already pursued; in addition, certain experiments in metabolism have been added to the regular work of the students, thereby supplementing the lectures much more efficiently than heretofore. These advantageous additions

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to the course have been made possible by the fact that first-year students now devote all their time in the afternoons, from Monday to Friday inclusive during the second half-year, to the work of this course. Several first-year students, already possessed of extensive chemical training, have been able to devote a part of their time to work of a special nature.

The following papers have been published: —

On the occurrence of oxidative ferments in a melanotic tumor of the liver. By CARL L. ALSBERG. *The Journal of Medical Research*, 1907, Vol. XVI, No. I, p. 117.

Über die Hydrolyse der Proteine Mittels verdünnter Schwefelsäure. By P. A. LEVENE and C. L. ALSBERG. *Biochemische Zeitschrift*, 1907, Vol. IV, p. 312.

Concerning the excretion of phosphoric acid during experimental acidosis in rabbits. By R. FITZ, C. L. ALSBERG, and L. J. HENDERSON. *American Journal of Physiology*, 1907, Vol. XVIII, No. II, p. 113.

Concerning the neutrality of protoplasm. By L. J. HENDERSON and O. F. BLACK. *American Journal of Physiology*, 1907, Vol. XVIII, No. III, p. 250.

The preservation of neutrality in culture media with the aid of phosphates. By L. J. HENDERSON and H. B. WEBSTER. *The Journal of Medical Research*, 1907, Vol. XVI, No. I, p. 1.

Concerning the adiabatic determination of the heats of combustion of organic substances, especially sugar and benzol. By T. W. RICHARDS, L. J. HENDERSON, and H. L. FREVERT. *Proceedings of the American Academy of Arts and Sciences*, 1907, Vol. XLII, No. 21, p. 573.

Concerning position, isomerism, and heats of combustion. By L. J. HENDERSON. *Proceedings of the American Academy of Arts and Sciences*, 1907, Vol. XLII, No. 24, p. 639.

A clinical method for determining the alkalinity of the blood. By HERMAN M. ADLER. *The American Journal of Physiology*, 1907, Vol. XIX, No. I, p. 1; *The Journal of the American Medical Association*, 1907, Vol. XLIX, p. 461.

The cause of infantile atrophy. Deduced from a study of secretin in normal and atrophic infants. By A. H. WENTWORTH. *The Journal of the American Medical Association*, 1907, Vol. XLIX, p. 204.

Concerning glycolysis. By G. W. HALL. *The American Journal of Physiology*, 1907, Vol. XVIII, No. III, p. 283.

The following unpublished investigations have been concluded: —

The influence of change of temperature on the alkalinity of the blood. By L. J. HENDERSON and O. F. BLACK.

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A method for the direct determination of heats of reaction. By L. J. HENDERSON and C. T. RYDER.

A method for the determination of acetacetic acid. By O. F. BLACK.

Metabolism after castration. By F. H. MCCRUDDEN.

*Bacteriology.* — The following papers have been published during the year: —

Zur schnellen Darstellung der Negrischen Körperchen. By Dr. LANGDON FROTHINGHAM. *Zeitschrift für Tiermedizin*, 1907, Vol. II, p. 378.

The methods for testing the indol reaction. The cholera-red reaction and the indol reaction. Non-virulent diphtheria bacilli from an infected middle ear. By Dr. E. N. TOBEY. *The Journal of Medical Research*, Vol. XV, pp. 301, 305, and 319 respectively.

*Pathology.* — The following publications have appeared from the Department of Pathology during the past year: —

The origin of cells of the lymphoid cell series and the part they play in pathological conditions. Address before the Harvey Society. By Dr. W. T. COUNCILMAN. *The Journal of the American Medical Association*, April, 1907.

The new Harvard Medical School; its ideals and methods. Address before the Harvard Medical Society of New York. By Dr. W. T. COUNCILMAN. *The Harvard Graduates' Magazine*, June, 1907.

Some general considerations regarding tumors. Address before the Maine Medical Association. By Dr. W. T. COUNCILMAN. *The Boston Medical and Surgical Journal*, August, 1907.

The pathology of diphtheria and the pathology of scarlet fever. By Dr. F. B. MALLORY. *Osler's Modern Medicine*, Vol. II.

Die Entstehung der Blutplättchen. By Dr. J. H. WRIGHT. *Virchow's Archiv*, Vol. CLXXXVI, p. 55.

Diseases due to vegetable parasites other than bacteria. By Dr. J. H. WRIGHT. Part V of Vol. I of *Osler's Modern Medicine*.

Lesions of the granule layer of the human cerebellum. By Dr. E. E. SOUTHARD. *The Journal of Medical Research*, Vol. XVI, No. 1, pp. 99–116, March, 1907.

Congenital rhabdomyoma of the heart. Report of a case associated with multiple nests of neuroglia tissue in the meninges of the spinal cord. By Dr. S. B. WOLBACH. *The Journal of Medical Research*, Vol. XVI, No. 3, pp. 495–519, July, 1907.

The pathology of the brown-tail moth dermatitis. By Dr. E. E. TYZZER. *The Journal of Medical Research*, Vol. XVI, No. 1, pp. 43–64, March, 1907.

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The application of the card-cabinet system in the storage of microscopical slide preparations. By Dr. E. E. TYZZER. *The Journal of Medical Research*, Vol. XVI, No. 2, pp. 219–221, May, 1907.

On serum anaphylaxis in the guinea-pig. By Drs. F. P. GAY and E. E. SOUTHARD. *The Journal of Medical Research*, Vol. XVI, p. 143, May, 1907.

Recent progress in the prevention and cure of tuberculosis. By Dr. F. P. GAY. *International Clinics*, 1907, Vol. I, Seventeenth Series.

The etiology and experimental study of syphilis. By Dr. F. P. GAY. *International Clinics*, 1907, Vol. III, Seventeenth Series, p. 199.

*Comparative Pathology.* — During the year much time was devoted to the organization of the laboratory in its new quarters. One important object in view was to make it available for fourth-year students as well as graduates engaged in research. In order to carry on carefully-planned pro-research courses satisfactorily much preliminary work must be done owing to the use of living objects such as protozoa, bacteria, and higher animals. This work cannot be entrusted to the students themselves, but must be done by trained assistants and aids. Before such courses can be given, an instructor who is paid enough to give his entire time to the laboratory will be needed.

There is furthermore needed at the Bussey Institution a small building where some one spontaneous infectious disease of the domestic animals may be studied at a time. Such a building should include a small laboratory room for work which must be done near the animals under observation, an autopsy room for large animals, and shelter for a few animals affected with spontaneous or induced disease. It is only through such equipment that the work of this department can be differentiated from that of other existing departments at present. Such a small plant would make accessible to study important problems of disease not now within reach of the human pathologist. It would be useful to sanitary science and to agriculture, it would provide material for the regular courses, and bring the student into contact with actual disease as the much-needed inspiration for painstaking research.

During the year the following work was completed and published:

The degree and duration of passive immunity to diphtheria toxin transmitted by immunized female guinea-pigs to their immediate offspring. By Professor THEOBALD SMITH. *Journal of Medical Research*, Vol. XVI, pp. 359–379.

The resistance of the red blood corpuscles of the horse to salt solutions of different tonicities before and after repeated withdrawals of blood. By

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Professor THEOBALD SMITH and Mr. HERBERT R. BROWN. *Journal of Medical Research*, Vol. XV, pp. 425–447.

Studies in mammalian tubercle bacilli, IV. Bacilli resembling the bovine type from four cases in man. By Professor THEOBALD SMITH and Mr. H. R. BROWN. *Journal of Medical Research*, Vol. XVI, pp. 435–450.

The channels of infection in tuberculosis together with some remarks on the outlook concerning a specific therapy. By Professor THEOBALD SMITH. *Transactions of the Massachusetts Medical Society* for 1907, 26 pp.

Hemorrhagic hepatitis in antitoxin horses. By Dr. PAUL LEWIS. *Journal of Medical Research*, Vol. XV, pp. 449–468.

Diphtheria-toxon paralysis in the guinea-pig. By Dr. PAUL LEWIS. *Journal of Medical Research*, Vol. XV, pp. 469–482.

*Experimental Pharmacology and Therapeutics.* — Dr. Maurice Vejux Tyrode finished a research on the pharmacological action of camphoric acid.

*Theory and Practice.* — A new feature in the department is the Laboratory of Clinical Pathology. This has been established for the purpose of training the students in the application of histological, chemical, and bacteriological methods in connection with the diseased patient. Students are encouraged to collect material from patients under their observation with the view of further extending their investigation of the particular case. Opportunity is offered also to students and to graduates for researches, especially for those having significance in the practice of medicine.

Under the supervision of Dr. J. H. Pratt, Messrs. F. W. Peabody and A. D. Long engaged in a study of the occurrence of typhoid bacilli in the stools of typhoid patients, and published their results in the *Journal of the American Medical Association*, September, 1907. Dr. Pratt and Mr. Peabody also investigated the value of malachite green in the differentiation of typhoid and colon bacilli. This study is to be published in the *Centralblatt für Bakteriologie*.

Dr. H. M. Adler completed an investigation which was published as follows: —

A new indicator for free mineral acids. *Journal of the American Medical Association*, Vol. XLIX, 1907.

Dr. R. H. Fitz gave the President's address on the borderland of Medicine and Surgery at the Seventh Session of the Congress of American Physicians and Surgeons, published in abstract in the *Boston Medical and Surgical Journal*, 1907, Vol. CLVI, p. 655, and to appear in full in the *Transactions of the Congress*.

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Dr. H. A. Christian's publications during the year were as follows: —

Progress in the theory and practice of medicine. Diseases of the kidney. *Boston Medical and Surgical Journal*, 1907, Vol. CLVI, p. 365.

Diagnosis of mediastinal disease. An address before the South Essex District Medical Society, January 8, 1907. *Virginia Medical Semi-Monthly*, May 10, 1907, Vol. XII, p. 56.

The cause of a positive agglutination reaction in icterus. *Boston Medical and Surgical Journal*, April 25, 1907, Vol. CLVI, p. 536.

Diagnosis of dilatation of the duodenum; a clinical note. *Boston Medical and Surgical Journal*, May 9, 1907, Vol. CLVI, p. 609.

Solid teratoma of the mediastinum. Presented at the meeting of the American Association of Pathologists and Bacteriologists, Washington, May 7 to 9, 1907. *Journal of Medical Research*, 1907, Vol. XVI, p. 275.

Multiple myeloma; a histological study of six cases. Presented at the meeting of the Association of American Physicians, Washington, May 7 to 9, 1907. *Journal of Experimental Medicine*, July, 1907, Vol. IX, p. 325.

A critical estimate of the specific gravity fermentation method of quantitating sugar in diabetic urine. Presented before the Medical Section of the American Medical Association at Atlantic City in June, 1907. *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 176.

Diffuse carcinoma of oesophagus, stomach, and duodenum. Presented before the Section on Pathology and Physiology of the American Medical Association at Atlantic City in June, 1907. *Journal of the American Medical Association*, 1907, Vol. XLIX, p. 650.

Medical teaching at Harvard and the opportunity it offers the young graduate for medical training. An address before the Harvard Medical School Alumni Association, June 25, 1907. *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 67.

Progress in the theory and practice of medicine. Blood pressure. *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 222.

Other publications by members of the department are as follows: —

Diseases of the biliary passages. By Dr. E. G. CUTLER. *Boston Medical and Surgical Journal*, 1906.

Acidosis. By Dr. ELLIOTT P. JOSLIN. *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 40.

Gastro-enterostomy. By Drs. ELLIOTT P. JOSLIN and HARRY W. GOODALL. *Boston Medical and Surgical Journal*, 1907, Vol. CLVI, p. 506.

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Recent progress in diabetes. By Drs. ELLIOTT P. JOSLIN and HARRY W. GOODALL. *Boston Medical and Surgical Journal*, 1906, Vol. CLV, pp. 710, 744, 774.

The daily care of consumptives at a general hospital as an aid to solving local tuberculosis problem. By Drs. A. K. STONE and CLEAVELAND FLOYD. *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 141.

Dr. Franklin W. White has published the following papers: —

Achylia gastrica. *Boston Medical and Surgical Journal*, 1906, Vol. CLV, pp. 532–539.

Value of tests for invisible hemorrhage in diagnosis and treatment of diseases of the digestive organs. *Journal of the American Medical Association*, 1907, Vol. XLVIII, pp. 506–515.

Cancer of colon. Gastric ulcer. *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 296.

Case of benign indurated ulcer of the pylorus simulating malignancy. (With Dr. F. B. LUND.)

Case of pyloric obstruction due to ulcer scar and adhesions. (With Dr. F. B. LUND.) *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 330.

Case of neurosis of oesophagus. *Boston Medical and Surgical Journal*, 1907, Vol. CLVII, p. 333.

*Surgery and Clinical Surgery.* — The required instruction in these departments has not been materially changed during the year. In the latter part of the academic year students were appointed as surgical dressers in the wards of the Boston City Hospital by the Trustees. Each month two or three students also were appointed as dressers at the Relief Station of the Boston City Hospital.

In March the Laboratory for Surgical Research was opened for work. It was placed in charge of Dr. Burrell with a council composed of Drs. J. C. Hubbard, J. B. Blake, R. W. Lovett, Paul Thorndike, C. A. Porter, J. G. Mumford, H. A. Lothrop, and R. B. Greenough.

A certain sum of money was given to the laboratory by Mr. John S. Ames for its equipment, and to meet the expenses of such pieces of research work as have the approval of those in charge of the laboratory. Grants have been made for special work to Dr. J. B. Blake on peritoneal adhesions; Dr. A. W. George, on infectious arthritis; Dr. A. H. Gould, biliary fistula, and Dr. N. R. Mason on Cesarean sections, while Dr. J. C. Hubbard has been working on some of the ductless glands.

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The work of the Caroline Brewer Croft Cancer Commission has been carried on by Dr. E. E. Tyzzer and his assistants, and has consisted chiefly in the study of spontaneous and inoculable tumors of mice. Dr. Tyzzer has prepared three papers which are now in press and will be published shortly, forming the fourth report of the Commission. The titles of these papers are as follows: —

The inoculable tumors of mice.

A series of twenty spontaneous tumors in mice, with accompanying pathological changes and results of inoculation of certain of these tumors into normal mice.

A study of heredity in relation to the development of tumors in mice.

An anonymous gift of $2,500 for the investigation of cancer, to be used under the direction of the Caroline Brewer Croft Cancer Commission, was received during the year.

Besides special pieces of research work done in the Laboratory of Surgical Research the following work has been carried on along the lines of instruction: —

The number of mounted experimental lesions given to the class has been very greatly increased, and a very considerable number of micro-photographs for teaching purposes have been added to the class equipment. A beginning has been made toward the arrangement and classification of the gross specimens available for the proposed fourth-year course.

*Neurology.* — The teaching during the year was modified in minor details through the assumption of a part of the work of the third year by Dr. E. W. Taylor; the work of the fourth year during the first half-year being assumed more especially by Professor Putnam. An attempt which met with some success was made to give the students of the third year practical instruction in small sections in the neurological out-patient department of the Massachusetts General Hospital.

Early in the year the second volume of *Contributions* from the Neurological Department, mention of which was made in the last report, was published. A number of inquiries for this publication have come, both from this country and abroad, and it seems likely to fulfil the object for which it was designed; namely, to concentrate the published work of the department in readily available form.

The following papers have been published during the past year: —

Pulse pressure estimation. By Dr. J. J. Putnam. *Boston Medical and Surgical Journal*, March 14, 1907.

Unusual pupillary phenomena in hysteria. By Dr. J. J. Putnam. *Boston Medical and Surgical Journal*, April 4, 1907.

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Recent progress in neurology. Aphasia. By Dr. P. C. KNAPP. *Boston Medical and Surgical Journal*, May 23, 1907.

Tumor of the spinal cord leading to destruction of the lumbar region, hydrocephalis, double optic neuritis, and painless labor. By Dr. E. W. TAYLOR. *Boston Medical and Surgical Journal*, February 7, 1907.

Painless labor. Report of a case due to destructive lesion of the spinal cord. By Dr. E. W. TAYLOR. *Boston Medical and Surgical Journal*, July 4, 1907.

Senile trepidant abasia. Report of cases. By Dr. E. W. TAYLOR. *Boston Medical and Surgical Journal*, August 15, 1907.

The analytic method in psychotherapeutics. Illustrative cases. By Dr. E. W. TAYLOR, with Dr. H. LINENTHAL. *Boston Medical and Surgical Journal*, November 8, 1906.

Experience in the treatment of tabes by coördinative exercises. By Dr. E. W. TAYLOR, with Mr. E. A. LINDSTRÖM. *Boston Medical and Surgical Journal*, December 13, 1906.

*Hygiene.* — Drs. George Burgess Magrath and Donald Gregg conducted a series of experiments to determine the amount of potassium permanganate necessary to bring about the most abundant evolution of pure formaldehyde gas from a given volume of formalin in the disinfection of dwellings and other confined spaces. Experiments were made along the same lines on the efficiency of potassium dichromate. The results have not yet been published.

Dr. William F. Boos and Mr. H. R. Brown, under the direction respectively of Professors Charles Harrington and Theobald Smith, made an extensive study to determine what deleterious changes, if any, occur in the flesh of drawn and undrawn poultry kept in cold storage. The results of the inquiry will be published in the annual report of the State Board of Health, at whose request the investigation was undertaken.

Professor Harrington's publications during the year were as follows: —

Infantile mortality and its principal cause — dirty milk. *American Journal of the Medical Sciences*, December, 1906.

Milk as a carrier of infection. *New York Medical Journal*, April 13, 1907.

Progress in Hygiene. *Boston Medical and Surgical Journal*, May 9 and 16, 1907.

An outbreak of scarlet fever, due, apparently, in part to infected milk. *Monthly Bulletin of the State Board of Health*, May, 1907.

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An outbreak of diphtheria due to infected milk. *Boston Medical and Surgical Journal*, June 27, 1907.

The movement for pure food. *Proceedings of the Sixth Annual Conference of Sanitary Officers of the State of New York*, Albany, 1907.

Medical inspectors: Their function. *Proceedings of the Massachusetts Medical Society*, 1907.

The problem of city milk supplies. *Papers and Reports of the American Public Health Association*, Vol. XXXII, Part 1, 1907.

The following paper was published by Dr. George Burgess Magrath: —

An outbreak of typhoid fever in Natick, Wellesley, and Needham. *Monthly Bulletin of the State Board of Health*, October, 1906.

*Museum.* — With the installation of the collection in the new building an opportunity was afforded for the rearrangement of the specimens, and during the year the Curator and his assistants have devoted themselves chiefly to this work.

In accordance with modern ideas a classification based on aetiology has been adopted, and the following are its main divisions: —

I. Disturbances of the body, or its organs, due to congenital malformations.
II. Tumors or new growths.
III. Faulty nutrition or metabolism.
IV. Injury.
    (*a*) Mechanical.
    (*b*) Chemical (poisons).
V. Infection.
    (*a*) Bacteria.
    (*b*) Worms, insects, etc.
VI. Unknown.

This order has been kept as closely as possible, beginning with the bones, then the joints, connective tissue, muscles, skin, and lastly the viscera.

In a collection which has to serve the double purpose of exhibition and daily use in the lecture room, no system can be absolutely adhered to, for there are practical questions of convenience of use which will interfere. On the whole the plan has worked out very well.

To facilitate the usefulness to visitors large labels indicating the chief divisions have been extensively placed on the cases and shelves. Besides arranging the specimens many of them have been permanently mounted or remounted for their better preservation and display.

Professor Dwight has shown great interest in the anatomical collection and has devoted much of his time to its proper exhibition.

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He has also contributed many interesting and valuable specimens, especially of variations in bone, which has given it a high rank in this respect. To the ethnological part he has given a fine specimen of a mummified head from South America, known as "Shanza."

The collection of historical surgical instruments has been entirely rearranged by Dr. Townsend W. Thorndike, and the Museum is under great obligations to him for his patient and careful work.

The movement on foot to replace the plaster busts in the main hall by marble ones has already made progress. The bust of Dr. Jacob Bigelow has been reproduced in marble, through the generosity of Dr. W. Sturgis Bigelow, and that of Dr. John C. Warren from a fund in Professor Warren's possession. Two other busts are also in the sculptor's hands.

Many specimens have been added during the year, but the most valuable is a unique collection of casts taken from cases of leprosy by the late Dr. Frank R. Day, of Honolulu, and deposited by Mrs. Day.

The Museum has been open to the public daily during the School terms, and during vacation to any properly interested person upon application. The number of students and visitors has been a very large one, and greatly in excess of any previous year.

*Proctor Fund for the Study of Chronic Diseases.* — In January, 1903, $50,000 was received from the estate of Miss Ellen Proctor of Brookline, the income of which was "to be devoted to the care in a hospital, or hospitals, of persons afflicted with chronic diseases, and to investigations into the nature and treatment of the same; the special disposition of the income of said fund to be under the control of the heads of the departments of Theory and Practice, Clinical Medicine, and Pathology in the Harvard Medical School."

In the year 1903–04 appropriations were recommended as follows: To the Division of Surgery, to spend in the study of arthritis deformans; to Dr. A. H. Wentworth, to enable him to investigate the subject of infantile metabolism, and to Dr. E. P. Joslin, to be used in the study of cancer of the pylorus.

In the year 1904–05 appropriations were recommended to Dr. P. A. Lewis for the purpose of an histological and experimental study of arteriosclerosis; to Mr. F. H. McCrudden, for investigations of metabolism in osteo-malacia and for the determination of the phosphorus and sulphur in the food, urine and faeces; to Dr. J. H. Pratt, for the study of the diagnostic value of the abnormal metabolism of fats.

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In 1905–06 appropriations were recommended to Dr. H. J. Hall to be utilized in the investigation of the treatment of neurasthenia by graded and progressive manual occupations; to Dr. H. A. Christian, to enable him to pursue investigations on chronic disease at the Massachusetts General Hospital; to Professor W. T. Councilman, to promote the study of the pathology of the arterial system, including arteriosclerosis; to Mr. F. H. McCrudden, in continuance of his work on osteomalacia and on the methods of analysis in metabolism experiments.

In 1906–07 appropriations were made to Dr. H. A. Christian and to Mr. F. H. McCrudden to enable them to continue their investigations begun in the previous year. Appropriations were recommended also to Dr. F. P. Gay, to carry on researches in serum pathology; to Dr. E. E. Southard, to investigate certain chronic diseases of the nervous system; to Dr. M. Böhm, to study special deformities in children; to Dr. A. H. Wentworth, in pursuance of his studies of infantile atrophy, and to Dr. W. Tileston, to enable him to carry on investigations of chronic disease at the Massachusetts General Hospital. The results of these investigations have been published as follows: —

Die numerische variation des Menschlichen Rumpfskeletts. By Dr. M. Böhm. *Zeitschrift für Orthopädische Chirurgie einschl. Heilgymnastik und Massage*, 1907, XIX, 1./2. Heft.

A consideration of the etiology and dietetic treatment of infantile atrophy. By Dr. A. H. Wentworth. *Journal of the American Medical Association*, August 26, 1905.

A study of the metabolism of atrophic infants and children. By Dr. A. H. Wentworth. *Journal of the American Medical Association*, September 9, 1905. (The Dalton Prize of the Massachusetts General Hospital was awarded for this essay.)

The composition of bone in osteo-malacia. By Mr. F. H. McCrudden. *American Journal of Physiology*, September 1, 1906.

The effect of castration on the metabolism in osteo-malacia. By Mr. F. H. McCrudden. *American Journal of Physiology*, November 1, 1906.

On serum anaphylaxis in the guinea-pig. By Drs. F. P. Gay and E. E. Southard. *Journal of Medical Research*, May, 1907.

Dr. H. A. Christian has published several articles the titles of which are given under the head of the Department of Theory and Practice.

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The Scholarships and Fellowships were awarded as follows: —

| | | |
|---|---|---|
| Joseph Pearson Oliver Scholarship, | K. I. Balcom, A.B., | 1st Class. |
| Barringer Scholarship, No. 1, | F. R. Clark, A.B., | 1st " |
| Isaac Sweetser Scholarship, | L. W. Bortree, A.B., | 1st " |
| Claudius M. Jones " | F. O. West, S.B., | 3d " |
| Hilton " | M. J. Shaughnessy, A.B., | 4th " |
| " " | H. V. Hendricks, S.B., | 2d " |
| Barringer " No. 2, | C. A. McDonald, Ph.B., | 4th " |
| Alfred Hosmer Linder Scholarship, | W. J. C. Sharpe, A.B., | 3d " |
| Eveleth " | R. C. Hunt, A.B., | 2d " |
| " " | J. E. Overlander, Ph.B., | 2d " |
| " " | E. S. Kilgore, S.B., | 2d " |
| Edward Wigglesworth " | H. Morrison, A.B., | 3d " |
| Charles B. Porter " | A. A. Howard, Ph.B., | 2d " |
| John Thomson Taylor " | H. S. Bernstein, A.B., | 3d " |
| Lucius F. Billings " | E. D. Bond, A.B., | 3d " |
| Orlando W. Doe " | J. P. Leake, A.B., | 4th " |
| Charles Pratt Strong " | C. W. Waddell, A.B., | 4th " |
| David Williams Cheever " | I. Gerber, A.B., | 1st " |
| Lewis and Harriet Hayden " (½) | G. W. S. Ish, A.B., | 2d " |
| " " " " " | L. E. Welker, Ph.B., | 4th " |
| Anonymous Gift, (½) | H. H. Smith, A.B., | 2d " |
| " " " | M. H. Neill, A.B., | 2d " |
| Cotting Gift, | A. T. Brant, A.B., | 4th " |
| John Foster Fund (⅔) | R. T. Congdon, A.B., | 4th " |

The George Cheyne Shattuck Fellowship was awarded Wilder Tileston, A.B., M.D., for a study of passive hyperemia of the lung and tuberculosis.

The Charles Eliot Ware Fellowship was awarded Francis H. McCrudden, S.B., for a study of the effect of castration on the metabolism.

The John Ware Fellowship was awarded Henry A. Christian, A.M., M.D., for a study of the cause of a positive agglutination reaction in icterus, and a critical estimate of the specific gravity fermentation method of quantitating sugar in diabetic urine.

The statistics of the School will be found in the following tables:

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## COURSES OF INSTRUCTION, 1906–07.

### FIRST YEAR.

| | Students examined. |
|---|---|
| Anatomy. — Professor T. DWIGHT, Demonstrator WARREN, Assistant FLAGG, Assistant MOSHER, Instructor DAVIS, Assistant BUTLER, Assistant MARCY, Assistant WADSWORTH, Assistant CHEEVER, Assistant BINNEY, Assistant SCANNELL, Assistant ROBINSON. | 75 |
| Physiology. — Professor W. T. PORTER, Professor CANNON, Instructor MARTIN, Instructor AUER. | 88 |
| Comparative Anatomy. — Professor MINOT, Asst. Professor LEWIS, Demonstrator BREMER, Teaching Fellow TERRY, Instructor SHEPARD, Austin Teaching Fellow THYNG. | 82 |
| Biological Chemistry. — Instructor ALSBERG, Instructor HENDERSON, Assistant BLACK, Assistant MCCRUDDEN. | 74 |

### SECOND YEAR.

| | |
|---|---|
| Bacteriology. — Professor ERNST, Assistant PAGE, Assistant PERRY, Assistant WORTHINGTON, Assistant PALFREY, Assistant EVERETT, Austin Teaching Fellow FROTHINGHAM. | 69 |
| Pathology and Pathological Anatomy. — Professor COUNCILMAN, Associate Professor MALLORY, Asst. Professor NICHOLS, Asst. Professor WRIGHT, Instructor WOLBACH, Asst. Professor SOUTHARD, Assistant TYZZER, Assistant ADAMS, Assistant ROBERTSON. | 65 |
| Comparative Pathology. — Professor T. SMITH, Instructor WOLBACH, Assistant ROBERTSON, Austin Teaching Fellow LEWIS. | |
| Hygiene. — Asst. Professor HARRINGTON, Assistant MAGRATH. | 68 |
| Theory and Practice. — Professor FITZ, Instructor CUTLER, Assistant STONE, Instructor JOSLIN, Instructor CHRISTIAN, Instructor HEWES, Assistant WHITE, Assistant BADGER, Assistant PRATT. | |
| Clinical Medicine. — Professor SHATTUCK, Asst. Professor SEARS, Instructor VICKERY, Assistant J. M. JACKSON, Instructor CABOT, Instructor H. JACKSON, Assistant ROBEY, Assistant LOCKE, Assistant LORD. | |
| Surgery. — Professor WARREN, Professor RICHARDSON, Professor BURRELL, Asst. Professor NICHOLS, Instructor LOTHROP, Instructor J. B. BLAKE. | |

### THIRD YEAR.

| | |
|---|---|
| Therapeutics. — Professor PFAFF, Instructor TYRODE, Assistant LLOYD. | 75 |
| Theory and Practice of Medicine. — Professor FITZ, Instructor CUTLER, Assistant STONE, Instructor JOSLIN, Assistant WHITE, Assistant BADGER, Assistant PRATT. | 66 |
| Obstetrics. — Professor W. L. RICHARDSON, Associate Professor C. M. GREEN, Instructor NEWELL, Assistant SWAIN, Assistant FRIEDMAN, Assistant TORBERT. | 67 |
| Otology. — Professor BLAKE. | 66 |
| Ophthalmology. — Asst. Professor STANDISH, Instructor JACK, Instructor QUACKENBOSS, Assistant CLAP, Assistant SPALDING, Assistant HASKELL. | 73 |

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Laryngology. — Asst. Professor Coolidge, Instructor Cobb, Assistant Clark, Assistant Goodale, Assistant Mosher, Assistant Coffin. 66

Syphilis. — Asst. Professor Post, Assistant C. M. Smith. 66

Clinical Obstetrics. — Professor W. L. Richardson, Associate Professor C. M. Green, Instructor Newell, Assistant Swain, Assistant Friedman, Assistant Torbert.

Dermatology. — Asst. Professor Bowen, Assistant Towle, Assistant Burns. 68

Diseases of the Nervous System. — Professor Putnam, Assistant Waterman. 67

Pediatrics. — Professor Rotch, Asst. Professor McCollom, Clinical Instructor Craigin, Assistant Professor Morse, Assistant Ladd, Assistant Dunn. 69

Psychiatry. — Instructor Cowles. 66

Gynaecology. — Associate Professor Green, Assistant Storer, Instructor Newell, Assistant Young. 65

Surgery and Clinical Surgery. — Professor Warren, Professor M. H. Richardson, Professor Burrell, Professor Bradford, Instructor Thorndike, Instructor Lothrop, Lecturer Gay, Lecturer Monks, Assistant Lund, Assistant Balch, Assistant Crandon, Instructor Porter, Lecturer Harrington, Assistant Codman. 65

Genito-Urinary Surgery. — Lecturer Watson, Instructor Thorndike.

Clinical Medicine. — Professor Shattuck, Asst. Professor Sears, Assistant Bartol, Instructor H. Jackson. 69

The following elective work was done by the students of the fourth year, under the supervision of the heads of Departments: —

Number of Half-Courses Elected for 1906–07.

| | | | |
|---|---|---|---|
| Anatomy | 42 | Pediatrics | 72 |
| Comparative Anatomy | 0 | Clinical Surgical Pathology | 7 |
| Embryology | 0 | Surgery | 113 |
| Histology | 0 | Genito-Urinary Surgery | 6 |
| Physiology | 8 | Orthopedics | 16 |
| Comparative Physiology | 0 | Surgical Pathology | 2 |
| Biochemistry | 2 | Obstetrics | 59 |
| Bacteriology | 0 | Gynaecology | 19 |
| Pathology | 6 | Dermatology and Syphilis | 8 |
| Neuropathology | 3 | Neurology and Psychiatry | 19 |
| Hygiene | 6 | Ophthalmology | 0 |
| Clinical Medicine | 108 | Otology | 1 |
| Theory and Practice | 28 | Laryngology | 9 |
| Clinical Pathology | 2 | | 536 |

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## GENERAL STATISTICS OF THE SCHOOL.

| | |
|---|---|
| New matriculants | 95 |

The whole number of students in attendance: —

| | |
|---|---|
| In courses for graduates | 68 |
| Fourth Class | 58 |
| Third Class | 54 |
| Second Class | 78 |
| First Class | 91 |
| Special Student | 1 |
| Total | 350 |

| | |
|---|---|
| Applicants for Degree (February) | 7 |
| Applicants for Degree (June) | 67 |
| Rejected | 3 |
| Graduated | 71 |

Of the 71 students who received the degree of Doctor of Medicine, 16 received the degree *cum laude*.

| | Summer Courses. | | | | | Graduate Courses. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1903. | 1904. | 1905. | 1906. | 1907. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
| Courses taken . | 188 | 177 | 222 | 306 | 281½ | 57 | 59½ | 88 | 104 | 93½ |
| Students . . . | 148 | 135 | 173 | 192 | 194 | 41 | 49 | 72 | 77 | 68 |
| Receipts . . . | $5280 | $4942 | $6497 | $8793 | $8501.50 | $1400 | $1446 | $2207 | $2663 | $2141 |

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## FINAL EXAMINATIONS.

| | 1903. | | | | 1904. | | | | 1905. | | | | 1906. | | | | 1907. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. |
| **First Class:—** | | | | | | | | | | | | | | | | | | | | |
| Histology | 70 | 5 | 75 | 7 | 68 | 4 | 72 | 5 | 54 | 6 | 60 | 10 | 66 | 6 | 72 | 8 | 72 | 10 | 82 | 14 |
| Physiological and Pathological Chemistry | 71 | 2 | 73 | 3 | 67 | 3 | 70 | 4 | 54 | 5 | 59 | 8 | 60 | 7 | 67 | 10 | 63 | 11 | 74 | 17 |
| Anatomy | 72 | 10 | 82 | 12 | 69 | 3 | 72 | 4 | 56 | 1 | 57 | 1 | 57 | 8 | 65 | 12 | 62 | 13 | 75 | 21 |
| Physiology | 66 | 33 | 99 | 33 | 50 | 34 | 84 | 40 | 60 | 19 | 79 | 24 | 69 | 17 | 86 | 18 | 77 | 11 | 88 | 14 |
| **Second Class:—** | | | | | | | | | | | | | | | | | | | | |
| Pathological Anatomy | 58 | 15 | 73 | 20 | 70 | 4 | 74 | 5 | 58 | 9 | 67 | 13 | 60 | 7 | 67 | 10 | 61 | 4 | 65 | 6 |
| Therapeutics | 67 | 39 | 106 | 37 | . . | . . | . . | . | . . | . . | . . | . | . . | . . | . . | . | . . | . . | . . | . |
| Bacteriology | 68 | 9 | 77 | 12 | 64 | 8 | 72 | 11 | 53 | 10 | 63 | 16 | 61 | 6 | 67 | 9 | 54 | 15 | 69 | 28 |
| Hygiene | . . | . . | . . | . | 64 | 3 | 67 | 4 | 63 | 4 | 67 | 6 | 69 | 4 | 73 | 5 | 51 | 17 | 68 | 33 |
| **Third Class:—** | | | | | | | | | | | | | | | | | | | | |
| Theory and Practice | 137 | 6 | 143 | 4 | 71 | 1 | 72 | 1 | 67 | 4 | 71 | 5 | 72 | 1 | 73 | 1 | 65 | 1 | 66 | 1 |
| Surgery | 132 | 8 | 140 | 6 | 65 | 2 | 67 | 3 | 63 | 0 | 63 | 0 | 60 | 2 | 62 | 3 | 64 | 1 | 65 | 1 |
| Obstetrics | 121 | 22 | 143 | 15 | 68 | 10 | 78 | 13 | 70 | 8 | 78 | 11 | 65 | 4 | 69 | 6 | 60 | 7 | 67 | 11 |
| Pediatrics | 128 | 12 | 140 | 9 | 70 | 6 | 76 | 8 | 69 | 6 | 75 | 8 | 68 | 3 | 71 | 4 | 69 | 0 | 69 | 0 |
| Dermatology | 131 | 16 | 147 | 11 | 66 | 10 | 76 | 13 | 71 | 2 | 73 | 3 | 68 | 4 | 72 | 5 | 65 | 3 | 68 | 4 |
| Gynaecology | 130 | 16 | 146 | 11 | 71 | 7 | 78 | 9 | 70 | 3 | 73 | 4 | 61 | 9 | 70 | 13 | 65 | 0 | 65 | 0 |
| Neurology | 139 | 8 | 147 | 6 | 73 | 6 | 79 | 7 | 67 | 5 | 72 | 7 | 68 | 6 | 72 | 9 | 62 | 5 | 67 | 8 |
| Therapeutics | . . | . . | . . | . | . . | . . | . . | . | 61 | 11 | 72 | 15 | 48 | 28 | 76 | 37 | 59 | 16 | 75 | 27 |
| Clinical Medicine | . . | . . | . . | . | . . | . . | . . | . | 63 | 6 | 69 | 9 | 70 | 6 | 76 | 8 | 62 | 7 | 69 | 11 |
| Clinical Surgery | . . | . . | . . | . | . . | . . | . . | . | 67 | 1 | 68 | 1 | 72 | 0 | 72 | 0 | 63 | 0 | 63 | 0 |
| Syphilis | . . | . . | . . | . | . . | . . | . . | . | 69 | 1 | 70 | 1 | 70 | 0 | 70 | 0 | 66 | 0 | 66 | 0 |
| Ophthalmology | . . | . . | . . | . | . . | . . | . . | . | 62 | 4 | 66 | 6 | 69 | 6 | 75 | 8 | 71 | 2 | 73 | 3 |
| Otology | . . | . . | . . | . | . . | . . | . . | . | 68 | 0 | 68 | 0 | 64 | 5 | 69 | 8 | 65 | 1 | 66 | 1 |
| Laryngology | . . | . . | . . | . | . . | . . | . . | . | 65 | 4 | 69 | 6 | 69 | 0 | 69 | 0 | 64 | 2 | 66 | 3 |
| Psychiatry | 136 | 6 | 142 | 4 | 71 | 5 | 76 | 6 | 74 | 0 | 74 | 0 | 70 | 3 | 73 | 4 | 66 | 0 | 66 | 0 |

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| Fourth Class. — Electives: — | | |

## FINAL EXAMINATIONS.

| | 1903. | | | | 1904. | | | | 1905. | | | | 1906. | | | | 1907. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. |
| **First Class:—** | | | | | | | | | | | | | | | | | | | | |
| Histology | 70 | 5 | 75 | 7 | 68 | 4 | 72 | 5 | 54 | 6 | 60 | 10 | 66 | 6 | 72 | 8 | 72 | 10 | 82 | 14 |
| Physiological and Pathological Chemistry | 71 | 2 | 73 | 3 | 67 | 3 | 70 | 4 | 54 | 5 | 59 | 8 | 60 | 7 | 67 | 10 | 63 | 11 | 74 | 17 |
| Anatomy | 72 | 10 | 82 | 12 | 69 | 3 | 72 | 4 | 56 | 1 | 57 | 1 | 57 | 8 | 65 | 12 | 62 | 13 | 75 | 21 |
| Physiology | 66 | 33 | 99 | 33 | 50 | 34 | 84 | 40 | 60 | 19 | 79 | 24 | 69 | 17 | 86 | 18 | 77 | 11 | 88 | 14 |
| **Second Class:—** | | | | | | | | | | | | | | | | | | | | |
| Pathological Anatomy | 58 | 15 | 73 | 20 | 70 | 4 | 74 | 5 | 58 | 9 | 67 | 13 | 60 | 7 | 67 | 10 | 61 | 4 | 65 | 6 |
| Therapeutics | 67 | 39 | 106 | 37 | . . | . . | . . | . | . . | . . | . . | . | . . | . . | . . | . | . . | . . | . . | . |
| Bacteriology | 68 | 9 | 77 | 12 | 64 | 8 | 72 | 11 | 53 | 10 | 63 | 16 | 61 | 6 | 67 | 9 | 54 | 15 | 69 | 28 |
| Hygiene | . . | . . | . . | . | 64 | 3 | 67 | 4 | 63 | 4 | 67 | 6 | 69 | 4 | 73 | 5 | 51 | 17 | 68 | 33 |
| **Third Class:—** | | | | | | | | | | | | | | | | | | | | |
| Theory and Practice | 137 | 6 | 143 | 4 | 71 | 1 | 72 | 1 | 67 | 4 | 71 | 5 | 72 | 1 | 73 | 1 | 65 | 1 | 66 | 1 |
| Surgery | 132 | 8 | 140 | 6 | 65 | 2 | 67 | 3 | 63 | 0 | 63 | 0 | 60 | 2 | 62 | 3 | 64 | 1 | 65 | 1 |
| Obstetrics | 121 | 22 | 143 | 15 | 68 | 10 | 78 | 13 | 70 | 8 | 78 | 11 | 65 | 4 | 69 | 6 | 60 | 7 | 67 | 11 |
| Pediatrics | 128 | 12 | 140 | 9 | 70 | 6 | 76 | 8 | 69 | 6 | 75 | 8 | 68 | 3 | 71 | 4 | 69 | 0 | 69 | 0 |
| Dermatology | 131 | 16 | 147 | 11 | 66 | 10 | 76 | 13 | 71 | 2 | 73 | 3 | 68 | 4 | 72 | 5 | 65 | 3 | 68 | 4 |
| Gynaecology | 130 | 16 | 146 | 11 | 71 | 7 | 78 | 9 | 70 | 3 | 73 | 4 | 61 | 9 | 70 | 13 | 65 | 0 | 65 | 0 |
| Neurology | 139 | 8 | 147 | 6 | 73 | 6 | 79 | 7 | 67 | 5 | 72 | 7 | 68 | 6 | 72 | 9 | 62 | 5 | 67 | 8 |
| Therapeutics | . . | . . | . . | . | . . | . . | . . | . | 61 | 11 | 72 | 15 | 48 | 28 | 76 | 37 | 59 | 16 | 75 | 27 |
| Clinical Medicine | . . | . . | . . | . | . . | . . | . . | . | 63 | 6 | 69 | 9 | 70 | 6 | 76 | 8 | 62 | 7 | 69 | 11 |
| Clinical Surgery | . . | . . | . . | . | . . | . . | . . | . | 67 | 1 | 68 | 1 | 72 | 0 | 72 | 0 | 63 | 0 | 63 | 0 |
| Syphilis | . . | . . | . . | . | . . | . . | . . | . | 69 | 1 | 70 | 1 | 70 | 0 | 70 | 0 | 66 | 0 | 66 | 0 |
| Ophthalmology | . . | . . | . . | . | . . | . . | . . | . | 62 | 4 | 66 | 6 | 69 | 6 | 75 | 8 | 71 | 2 | 73 | 3 |
| Otology | . . | . . | . . | . | . . | . . | . . | . | 68 | 0 | 68 | 0 | 64 | 5 | 69 | 8 | 65 | 1 | 66 | 1 |
| Laryngology | . . | . . | . . | . | . . | . . | . . | . | 65 | 4 | 69 | 6 | 69 | 0 | 69 | 0 | 64 | 2 | 66 | 3 |
| Psychiatry | 136 | 6 | 142 | 4 | 71 | 5 | 76 | 6 | 74 | 0 | 74 | 0 | 70 | 3 | 73 | 4 | 66 | 0 | 66 | 0 |

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| | | |

In the Graduate Courses the individual student did not take as many different courses as formerly, because the courses are much longer and more thorough.

In the Summer Courses there was a slight increase in the number of students. A considerable falling off would not have been surprising, in view of the fact that the attendance a year ago was notably increased by many men who came to Boston to attend the sessions of the American Medical Association and stayed over for the summer courses in medicine.

A study of the different summer courses for the past four years shows that the number of laboratory courses taken has steadily decreased, while the number of clinical courses attended has rapidly increased. In 1904 the number of laboratory courses taken was 60½, and clinical courses, 116½. The past year, 1907, the record shows 52 laboratory courses taken, and 229½ clinical courses.

WILLIAM L. RICHARDSON, *Dean.*

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# THE DENTAL SCHOOL.

To the President of the University: —

Sir, — As Dean of the Dental School I have the honor to submit the following report for the academic year 1906–07.

The number of students enrolled was 65, divided as follows: —

| | |
|---|---|
| Post-Graduate student | 1 |
| Third-year students | 27 |
| Second-year students | 16 |
| First-year students | 21 |
| | 65 |

There were twenty-six candidates for the degree in June, five of whom failed in the final examinations, leaving a graduating class of twenty-one, two of whom received the degree *cum laude*.

Instruction was given as follows: —

**Anatomy.** — Professor T. Dwight, Demonstrator Warren, Assistants Flagg, Mosher, Butler, Marcy, Davis, Wadsworth, Cheever, Binney, Scannell, and Robinson. 424 hours.

**Physiology.** — Professor Cannon, Instructors Martin and Auer. 348 hours.

**Comparative Anatomy.** — Professor Minot, Asst. Professor Lewis, Demonstrator Bremer, Teaching Fellow Terry, Austin Teaching Fellow Thyng. 252 hours.

**Physiological and Dental Chemistry.** — Austin Teaching Fellow Smith. 302 hours.

**Bacteriology.** — Professor H. C. Ernst, Assistants Page, Worthington, Palfrey, Perry, and Everett, Austin Teaching Fellow Frothingham. 160 hours.

**Materia Medica and Therapeutics.** — Professor E. C. Briggs, 32 lectures.

**Dental Pathology.** — Professor C. A. Brackett, 32 lectures; Instructor Hopkins, 6 lectures.

**Neurology.** — Instructor Taylor. 4 lectures.

**Crown and Bridge Work.** — Assistant Professor Cooke, 32 lectures; Assistant Professor Cooke, Instructors Eldred and Estabrooks. 96 hours.

**Mechanical Dentistry and Orthodontia.** — Professor E. H. Smith. 32 lectures.

**Orthodontia.** — Professor E. H. Smith, Instructors Baker and Howe. 96 hours. Instructor Howe, 64 conferences.

**Mechanical Dentistry and Orthodontia, Juniors.** — Instructor Baker. 10 lectures.

**Mechanical Dentistry.** — Clinical Instructor J. D. Dickinson. 16 hours.

**Mechanical Dentistry, Laboratory, Seniors.** — Demonstrator Cross, Instructors Hadley, Hayden, L. A. Rogers, Chute, Haley, Clarke, Gallahue, and Pope. 496 hours.

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Mechanical Dentistry, Laboratory, Juniors. — Demonstrator Cross, Instructors Davis, Langley, Dort, Weston, Eames, and Furbish, Assistant Kazanjian. 544 hours.

Anatomical Articulation, Mechanical Treatment of Fractured Jaws, Cleft Palate, and other Deformities. — Demonstrator Cross. 21 lectures.

Extracting and Anaesthesia. — Instructors Farrington, Hart, Marston, Squarebrigs, O'Brien, Stone, and Tishler. 477 hours.

Continuous Gum and Porcelain Inlay Work and Carving Teeth. — Clinical Lecturer Stoddard, 18 lectures and demonstrations, 16 clinics; Instructor Moffatt, 4 clinical lectures, 8 demonstrations.

Operative Dentistry, Seniors. — Professor Potter. 32 lectures.

Operative Dentistry, Juniors. — Instructor Dill. 32 lectures.

Operative Dentistry, Samaritan Hospital. — Instructor Rogers. 16 clinics.

Operative Dentistry, Infirmary, Seniors. — Demonstrator Wyman, Instructors Blaisdell, Furfey, Paul, Stanley, and Elliott. 624 hours.

Operative Dentistry, Infirmary, Juniors. — Demonstrator Wyman, Instructors Dill, Littig, Whitehill, Pike, and Crofwell. 403 hours.

Oral Surgery. — Instructor Shuman. 6 lectures; 32 clinics.

Syphilis. — Instructor C. Morton Smith. 6 lectures and clinics.

Surgical Pathology and Surgery. — Lecturer Monks, 11 lectures and demonstrations; Instructor Blake, 9 clinics at the Boston City Hospital.

The work of the School is shown in the following tables: —

## OPERATIVE DEPARTMENT.

| | |
|---|---|
| No. of patients treated | 5,772 |
| " treatments of teeth and gums | 1,367 |
| " sets of teeth cleansed | 787 |
| " operations | 12,330 |
| " fillings — gold | 1,564 |
| " " amalgam | 1,671 |
| " " cement | 632 |
| " " gutta percha | 1,570 |
| " enamel | 226 |

## Surgical Clinics.

| | |
|---|---|
| No. of cases of necrosis | 8 |
| " " abscess | 8 |
| " " antrum disease | 4 |
| " " epulis | 4 |
| " " cleft palate | 1 |
| " " impacted teeth | 16 |
| " " growth on lips | 1 |
| " " hare lip | 1 |
| " " plastic operation | 1 |
| " " stomatitis | 2 |
| " " ulcerated stomatitis | 1 |
| " " refracturing of the mandible | 1 |

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## MECHANICAL DEPARTMENT.

### Service to Patients.

| | |
|---|---|
| No. of patients treated | 1,226 |
| " sets of artificial teeth | 159 |
| " " " " repaired | 130 |
| " partial sets of artificial teeth | 129 |

### Practice Work.

| | |
|---|---|
| No. of specimen plates | 121 |

## INLAY WORK.

### Service to Patients.

| | |
|---|---|
| No. of porcelain inlays | 91 |
| " gold inlays | 34 |
| " porcelain tips | 18 |

### Practice Work.

| | |
|---|---|
| No. of porcelain inlays | 86 |

## FRACTURED JAWS.

### Service to Patients.

| | |
|---|---|
| No. of cases | 25 |
| " appliances | 27 |

## ARTIFICIAL PALATES.

### Service to Patients.

| | |
|---|---|
| No. of cleft palates | 11 |
| " obturators | 5 |
| " cleft palate appliances | 10 |

## ORTHODONTIA.

### Service to Patients.

| | |
|---|---|
| No. of patients treated for irregularities of the teeth | 93 |
| " appliances | 162 |
| " articulated models of regulating cases | 118 |

### Practice Work.

| | |
|---|---|
| No. of articulated models of regulating cases | 15 |
| " appliances | 60 |

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## CROWN AND BRIDGE WORK.

### Service to Patients.

| | |
|---|---|
| No. of crowns and caps | 147 |
| " crowns repaired | 25 |
| " pieces of bridge work | 48 |
| " " " repaired | 15 |

### Practice Work.

| | |
|---|---|
| No. of crowns and caps | 75 |
| " bridges | 45 |
| " carved teeth models | 5 |

On Saturday afternoons during January, February, and March special clinical instruction was given to third-year students as follows: —

| | |
|---|---|
| Dr. Forrest G. Eddy, Providence. | Treatment of Pyorrhea Alveolaris. |
| Dr. Henry W. Gillett, New York. | An approximal Gold Filling in a bicuspid. |
| Dr. Henry F. Libby. | Welding of Gold by Burnishing. |
| Dr. Jean J. Loizeau. | A solid gold inlay. |
| Dr. Ned A. Stanley, New Bedford. | An approximal bicuspid gold filling. |

### Summer School.

The Summer School was attended by twenty men; fourteen from Massachusetts, and one from each of the following places: New York, South Carolina, North Carolina, California, Portugal, and West Australia.

Instruction was given as follows: —

Orthodontia. — Professor E. H. Smith, 1 lecture; Instructors Baker and Howes, 2 hours.

Anatomical Articulation, Maxillary Fractures, Artificial Palates, and Prosthetic Work. — Demonstrator Cross, lectures and demonstrations, 11 hours.

Porcelain and Gold Inlays. — Clinical Lecturer Stoddard, lectures and clinics, 4 hours; Instructor Hadley, clinical demonstrations, 4 hours; Dr. Hovestadt, clinics and demonstrations, 6 hours.

Porcelain Crowns. — Instructor Stanley, demonstrations, 1 hour.

Carving Teeth. — Instructor Moffatt, demonstrations, 8 hours.

Crown and Bridge Work. — Assistant Professor Cooke, lectures and clinics, 2 hours; Instructor Estabrooks, demonstrations, 7 hours.

Operative Dentistry. — Instructor Stanley, Prophylaxis, lecture, 1 hour; Instructor Elliott, Combination Fillings, lectures and clinics, 4 hours; Instructor Blaisdell, Non-Cohesive Work and Pressure Anaesthesia, clinic and demonstrations, 4 hours.

Extracting and Anaesthesia. — Professor Potter, clinics, 3 hours; Instructor Squarebrigs, clinics, 6 hours.

Materia Medica. — Professor Briggs, lectures, 2 hours.

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Dental Chemistry. — Austin Teaching Fellow Smith, lecture, 2 hours. Also a course in General Chemistry and Qualitative Analysis, 175 hours.
Neurology. — Instructor Taylor, lecture, 1 hour.
Oral Surgery. — Instructor Shuman, clinic, 2 hours.
Syphilis. — Instructor C. Morton Smith, M.D., lectures and clinics, 4 hours.

In addition to the above, several private offices were thrown open to the students and special conferences held at specified times as follows: —

| | |
|---|---|
| Dr. Eugene H. Smith. | Prosthetic Restoration. |
| Dr. William H. Potter. | Care and Sterilization of Instruments. |
| Dr. Harry F. Hamilton. | Gold Inlays. |
| Dr. Harvey W. Hardy. | Prophylaxis. |

At the beginning of the school year C. Morton Smith, M.D., was appointed Instructor in Syphilis and gave a most interesting and valuable course with special clinical demonstrations. Patients afflicted with this disease were brought to the infirmary and the students were taught to recognize the various syphilitic lesions frequently found in the mouth and about the lips.

H. Carlton Smith, Ph.G., Austin Teaching Fellow in Dental Chemistry, continued his research work with fruit juices and saliva. He prepared several boxes of chemicals to be used by the dentists for the examination of saliva, and distributed them among practitioners. A circular letter was sent with each equipment, explaining its use and the importance of such investigations. Mr. Smith also read papers before several societies and gave demonstrations of our method of teaching Applied Dental Chemistry.

On June 6, 1907, Professor Potter read a paper before the section of Stomatology of the American Medical Association, on a case of Epidermoid Carcinoma of the Inferior Maxilla.

Professor Potter continued in charge of the work of the examination of the teeth of the pupils of the Pierce School in Brookline, and, in conjunction with Dr. William R. Woodbury, prepared a catechism on the care of the teeth, which was distributed among the poor of Boston and Brookline.

February 6, 1907, Professor Briggs read a paper before the American Academy of Dental Science on the Management of a Dental Practice.

During the year Demonstrator Cross gave clinics on Anatomical Articulation before the following societies: — Malden Dental Society, Malden, Mass.; Massachusetts Dental Society, Boston; First District Dental Society, New York.

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December 20, 1906, Instructor Gallahue gave a lecture on Dental Materia Medica before the Harvard Odontological Society, Boston.

The Administrative Board, during the winter, gave a series of social gatherings at the School to which the student body and teachers were invited. At each meeting there was a short talk on some topic of general interest, followed by music and a light lunch. The object of these meetings was to bring the students and teachers together and to foster a spirit of loyalty to the ideals of the School.

The loss in the number of students during the past two years is, I think, largely due to our advanced entrance requirements. Our old, unattractive building, however, is a constant and increasing menace to the prosperity of the School. I firmly believe that we have reached the bottom of our decline and are slowly recovering from the effects of our increased requirements, and that with a new building the number of students would rapidly increase.

EUGENE H. SMITH, *Dean.*

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# BUSSEY INSTITUTION.

To the President of the University: —

Sir, — I respectfully submit the following report on the Bussey Institution for the year 1906–07.

Forty-four students were registered at the Bussey Institution in the academic year 1906–07. This registration was larger than any that had occurred in any one year since the establishment of the School and was naturally the cause of great encouragement to the Instructors. In the previous year (1905–06) the registration was twenty-seven, and in 1904–05 it was twenty-three. As was to be expected, perhaps, in so large a number of candidates there was a tinge of disappointment in the fact that a few of the newcomers turned out to be not wholly desirable additions to the Class. In any event, however, the proportion of undesirables was so small that their existence hardly needs to be mentioned except as an item of history relating to the growth of the School.

Actually, thirty-seven of the enrolled men were proper, professional students of Agricultural and Horticultural subjects, while there were no more than seven in the list who were neither professional, studious, or legitimate in any sense. These men had sought to connect themselves with the University, for social ends, by a loose attachment to one of its Departments. After satisfying themselves that they were in a false and unprofitable position, they gradually withdrew from the School to the advantage of all concerned. It is a satisfaction to know that it will be easy henceforth to prevent any trouble such as this, now that the possibility of its existence is recognized and understood.

In addition to the Bussey students proper, sixteen students in Landscape Architecture, enrolled at Cambridge, came to the Bussey Institution as guests on stated days to attend lectures on Horticulture.

The degree of Bachelor of Agricultural Science was conferred upon six men at Commencement.

Methodical courses of instruction in Agriculture, Horticulture, Cattle Breeding, Cattle Feeding, Dairying, Agricultural Natural History, Botany and Practical Work in the Greenhouses, Agricultural Chemistry, Qualitative Chemical Analysis, Trigonometry, Land Surveying and Rural Construction were given by Messrs. Watson, Morse, Paige, Clarke, Dillingham, Robinette, Shedd, and Storer, throughout the year.

F. H. STORER, *Dean.*

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# THE LIBRARY.

To the President of the University: —

Sir, — I beg to submit this, my tenth annual report on the Library, covering the year 1906–07.

The chief event of the year has been the construction of a two-story addition along the north side of the east stack. The concrete foundations were laid late in the autumn of 1906; work was resumed early in the spring of 1907; and, by the middle of the summer, the builders were ready to throw together the new part and the old by removing the outside wall of the old delivery room and by cutting doors in other parts of the building. The impending changes in the delivery room made it necessary to close the Library for four weeks, from August 12 (after the end of the Summer School session) to September 7, — the first time the Library has been closed in more than thirty years. By means of printed notices addressed to other libraries and institutions, I tried to forewarn scholars in the spring that this Library would not be accessible during a part of the summer, but in spite of this, a number of professors and students from other places appeared, whose expected summer's work would have been seriously blocked by their being shut out of the Library, and in several cases admission to the book-stack was granted during the period of the Library's closure. At the closing of the Library, those who had been working here were permitted to borrow all the books they could profitably use outside, and during the four weeks books were constantly being sent out by mail or express in response to requests received through the postoffice. In this way the inconvenience was minimized so far as possible.

The improvement in the delivery room is even greater than was expected. For the first time the Library greets the visitor with an appearance of some dignity and amplitude. The old delivery counter has been cleared away, giving abundant space for passing back and forth and for consulting the catalogues. A new catalogue case against the east wall has permitted an expansion of the catalogue, and this in itself tends to diminish any crowding among those who use it. The repainting of the walls of this part of the room has made the light even better than before, in spite of the twenty-five

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feet added beyond the old windows on the north. The new delivery desk is placed in the new part of the room directly opposite the entrance, and is far enough from the back wall (which is completely filled by broad, high windows) to give convenient space for the carrying of books back and forth, the opening of bundles, sorting of mail, and checking of periodicals, for the work-table of the recording clerks, and for the desk of the Superintendent. The work of recording or charging loans has been lightened and expedited by a counter holding a row of twelve sliding trays, any one of which can be easily brought within reach of the clerk as she sits before her desk.

The other rooms in the addition are not quite completed, owing to various unforeseen delays, but they promise to be admirably adapted to the uses for which they are intended. I have had the satisfaction of planning the disposition of every foot of floor space and wall space, and have aimed at practical efficiency in every detail.

Opening from the delivery room is a small reference and reading room, with two generous tables and shelving on both side walls. On one side of the room will be bibliographical reference books such as supplement the subject catalogue; on the other side a few encyclopaedias, biographical dictionaries, and other general books of reference, such as have been found especially useful to inquirers in the delivery room and to members of the library staff, but the chief collection of reference books still remains in the reading room upstairs. Here also is a case of twenty-four drawers for the use of professors who wish to have a place in the Library where they can leave books and papers under lock and key. The greater part of these drawers are already assigned. For many years we have placed on open shelves in the delivery room the more interesting of the new accessions, in order that they may be seen, examined, and borrowed with the least possible formality. In this reference room we now expect to place on view for at least a week *everything* that comes into the Library — books, pamphlets, and annual reports, and even periodicals and society transactions, except such as are ordinarily kept in the periodical alcove in the reading room. By looking over the books and pamphlets placed on these shelves once a week, a reader will be able to keep track of everything added to the Library.

The next room, opening out of the reference room, will be used by members of the catalogue department, desks for six persons being provided. Shelves and cupboards along the walls give space for some reference books and for work in progress or waiting to be taken up.

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The third room will be known as the collating room and takes the place of the old room of the same name just outside the librarian's office. Here all the counter space possible is provided for the checking and arrangement of large invoices of books received from abroad. Here also are conveniences for pasting in the bookplates that indicate the source (fund or gift) of each book added to the Library. The bookplates, of which a great variety are naturally in use, are kept in a new case of drawers and are filed on edge like catalogue cards and in alphabetical sequence, an arrangement far more compact and convenient than was in use formerly. The fourth and last room on this floor will be occupied by the shelf department, which has now for some years been encamped in an alcove of the west stack, where its work has been performed under cramped conditions, and where it has itself been a source of annoyance to readers in the stack. Two large revolving bookcases, constructed for the purpose, will hold most of the shelf-lists and will keep them easily accessible to the two assistants who use them most. An elevator shaft, connecting all floors of the Library except the topmost, opens both into this room and into the stack, but is not yet provided with an elevator, the hydraulic elevator as planned having been found to be impracticable in this position, and one run by electricity being too expensive to install.

On the second floor, which is on the same level as the fourth floor of the east stack, or a few steps above the level of the general reading room, we have at the west end, opening from both the reading room and from the stack, a large room simply but handsomely finished in oak, with panelled walls and oak book-cases. This we shall call the Treasure Room, and here will be collected all the rare and precious volumes which have to be kept under lock and key, and which must be used under proper supervision. Those who desire to consult these books will accordingly use them here, instead of taking them off to some other part of the Library. The western half of the room is kept open for tables; in the eastern half floor cases project between the windows from the outside wall and at corresponding intervals from the opposite inside wall, making pleasant alcoves for quiet study. At the eastern end, there is to be a series of twenty-three sliding cases placed one in front of and directly contiguous to another, the ends of all being against the wall. Each case, in order to make its contents accessible, must be rolled out from between its next neighbors. By this means great economy in storage is attained. We may say, for example, that while ordinary shelving would give us a mass of books against the wall perhaps eight inches

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thick (the average width of a book), this gives us a mass of books of similar extent but over three feet thick, each case being a little more than three feet in length. We owe the suggestion for this method of construction to the Bowdoin College Library, where Mr. Little has had a few cases in his office built on a similar plan. It will be noticed that the plan differs radically from the well known sliding cases of the British Museum. Those hang in the broad aisles and are pushed from one side to the other in a direction at right angles to their length. These run in the same direction as their length, and when not in use form a solid mass against the wall. It is to be expected that the plan will be found particularly well adapted to collections such as are to be kept in our Treasure Room, — that is, to books not in frequent use and of such a character that they should be protected from unauthorized handling. After the cases have been well tested and found to be satisfactory, I shall be glad to communicate to other libraries full particulars in regard to details of construction.

The other cases in this room having been completed before the sliding cases were finished, I was glad to use the room first for an exhibition of memorials of John Harvard and his contemporaries, in connection with the recent celebration of the three hundredth anniversary of Harvard's birth. Since the Library takes its origin from the little collection bequeathed by John Harvard, it was fitting that the Library should take some part in the celebration of his birthday, and should attempt to display whatever might throw light upon the personality and environment of its founder.

A list of his books is fortunately preserved in the earliest record book of the College, written by the hand of the first President.* Mr. Potter has studied carefully the brief titles of this rough list, and has succeeded in identifying a large proportion of them. Although only one, or at most two, of the identical volumes bequeathed by Harvard survived the fire of 1764, and have come down to our day, it was found that many of his books were now represented by other copies on our shelves. By drawing from these and by borrowing from the Boston Public Library, the Boston Athenaeum, the American Antiquarian Society, the Trinity College Library, the Case Library of the Hartford Theological Seminary, the General Theological Seminary, New York, and from some private libraries, Mr. Potter was able to bring together about 180 volumes of the 373

* Printed in the Library's Bibliographical Contribution no. 27, 1888: A few notes concerning the records of Harvard College, by Andrew McFarland Davis, pp. 7–13.

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which a careful examination of the list shows was about the number received from Harvard's bequest. The collection formed one of the most interesting portions of the exhibition. Mr. Potter notes the following facts in regard to it: —

"Harvard's library was mainly theological. About seventy per cent. of his whole collection may be classed as theology, and of this, over half consisted of biblical commentary or exegesis. It is interesting to note that there were several Roman Catholic works, and also that there was comparatively little religious controversy. In other fields, we find that the classics are represented by 27 volumes, both in the original and in English translation; grammars and dictionaries form a group of 22 volumes; half a dozen volumes may be classed as science; logic claims seven volumes; English literature is represented by only five works, and history by four; and there are two books in law and three or four in medicine. As for languages, the library was about equally divided between English and Latin, although there were several works in Greek and in Hebrew. Apparently there was nothing in either French or German."

Mr. Tillinghast contributed to the exhibition by studying John Harvard's contemporaries in England and America, and bringing together books by or about them, with portraits and autographs so far as possible. It was found that the Library shelves yielded many interesting maps and views, such as the maps, or rather bird's-eye views, reproduced by the London Topographical Society, especially that of N. J. Visscher, drawn in 1616 when John Harvard was a boy of nine, and showing in detail a view of the houses in the Borough Road, directly opposite that in which his father then lived. Views of St. Saviour's, Emmanuel College, South Malling Church, and other places connected with Harvard's brief life were also shown. Just at the close of the exhibition, we received from England photographic facsimiles of the more important documents connected with Harvard, his mother's and his brother's wills, records from parish registers, copies of leases, etc. For procuring these, we are indebted to Professor Gross, now in London. The Rev. Dr. McKenzie lent us for exhibition the original manuscript of Thomas Shepard's autobiography, in which he speaks of Harvard's death and of his bequest; also a volume of his manuscript sermons, one of which was the election sermon of 1638, doubtless listened to by Harvard. Professor Palmer lent several early editions of English poets, contemporaries of John Harvard in Cambridge, and Mr. John Boyd Thacher, of Albany, kindly sent a number of autographs, English and American, drawn from his great collection. We were fortunately able to borrow from the Botanical Museum

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two show-cases precisely adapted to our needs, and in these some of the rarer volumes were displayed.*

The room is in most respects admirably suited to be used as an exhibition-room, and it would be easy to maintain here a series of interesting exhibitions throughout the year. But, desirable as this would be, the principal purpose of the room, namely, to provide for the use as well as the preservation of the books shelved in it, makes it necessary to protect its quiet as a place of study. I hope, nevertheless, that it may not prove impossible to use it occasionally for exhibition purposes.

To return to our survey of the new building, the room adjoining the Treasure Room, but not connected with it, is the Map Room, in which we expect to be able to bring together our whole great collection of maps and atlases, now widely scattered in different parts of the Library. The map portfolios are disposed on sliding shelves in cases about five feet high which line two sides of the room. Most of the atlases are shelved in two tiers above these cases; others will be placed in a horizontal position on sliding shelves. A sloping counter in front of the windows, a broad table in the middle of the room, and an additional floor case for larger maps and for reference books complete the equipment of the room. A broad skylight in the roof gives ample light in every part. I should like to see placed in this room a memorial tablet to my predecessor, Mr. Justin Winsor, whose eminence as a cartographer, and whose special interest in the Library's map collection, would make this the most appropriate place in which to commemorate him.

The third room on this floor, the corner room, is a class-room for the convenience of small classes which require to use at their meetings a large number of books from the Library's shelves. Shelves along one wall, a long table in the middle of the room, and three smaller tables, comprise the necessary furniture.

The space over the sliding shelves in the Treasure Room forms an extension from the fifth floor of the stack, where a few additional tables for study will be placed and where typewriters may be shut in, so as not to disturb readers with the continuous click of their machines.

In the basement, we get, at the east end, a room where boxes and bundles may be delivered by the express and unpacked. Here are

* I may add that, during the period of Mr. Cobden Sanderson's lectures on book-binding and book-making, one of these cases was used to exhibit some of the beautiful work of his press and bindery, and the room was opened two evenings at the close of his lecture, in order that the books might be examined by those who attended.

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also four generous store-closets, where the chore-women keep their implements, and where stationery and other supplies are under lock and key.

Next to this is a storeroom where duplicates will be shelved until disposed of, and where large gifts may be temporarily placed while the volumes are being looked up on the catalogues. Such a storeroom is not the least among the conveniences provided by the addition; duplicates and waiting gifts have hitherto had to be stored wherever empty shelves could be found for them here and there in the stack.

The rest of the basement is occupied with shelves to which nearly the whole of our collection of Parliamentary Papers has been already transferred. Better basement windows and more table space give better facilities for using this valuable and much sought collection, and the nine rows vacated by it in the first floor of the stack will be filled by the Library's works on bibliography, which we have not heretofore been able to bring together and classify.

Some further desired changes in the old basement, on the south side of the stack, have not yet been begun, because it was not clear that the means at our disposal would suffice, but work on them should not be further delayed. These changes will give us additional shelving for our pamphlet collection and a small but tolerably convenient lunch-room for the ladies of the staff.

The material of which this addition to the Library has been built and the method of construction are interesting, and suggest what may possibly be the best method of enlarging the Library in the future. The foundations, floors, and roof are of reinforced concrete mixed and laid on the spot; the walls are of concrete blocks moulded at the manufacturer's, of a color to match the granite of the old building, and laid in courses in the same manner that stone is laid. The outside effect is admirable, the saving in expense over granite very considerable, and the strength of the wall superior to what is attained by the usual brick-lined stone construction of the present time. The masking of the old north wall of the east stack by the new outside wall has greatly improved the appearance of the building, and Professor H. L. Warren, the architect of the addition, has studied the possibility of making further extensive additions of the same kind to the present Library, so as to equip it satisfactorily for many years to come.

In my last report, as in several other reports, I called attention to the fact that in recent years increase in the staff has by no means kept pace with the increase in work to be done, — an increase caused both by larger annual accessions, by a larger public to be served,

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and by the more crowded condition of the Library shelves. Indeed, the staff is hardly larger than it was ten years ago, when I became librarian, yet the accessions of the last two years, 1905–07, have been more than half as large again as those ten years ago, 1895–97. With the provision of larger working rooms for the staff, the need for an increase in numbers becomes more imperative, in order that we may catch up with arrears of work in cataloguing and in the care of the pamphlet files, and may be able more promptly to forward book orders, pay bills, dispose of duplicates, and handle gifts. The bringing together of our rare books into the Treasure Room also ought to be followed by extra work upon them which might profitably engross one person's time for a year.

The service which this Library can render other libraries by lending books increases from year to year. The list of institutions to which books were sent in the course of the last year is given at the foot of the page,* and it is interesting to notice how they are scattered from one end of the country to the other. This portion of the Library's work has become no small task, since probably no day goes by that does not bring one or more applications, but I feel that the service rendered to American scholarship is of the greatest value. What has been already done in this direction, however, only suggests, as I pointed out in my last report, how much more might be done if distinct provision could be made for it. I have given the matter much thought during the past year, and have worked out a plan by which a moderate endowment might yield great results to the benefit of all American colleges. I believe that a central lending library, established in connection with the Harvard Library, to fur-

* *Colleges and universities:* Adelbert, Amherst, Brown, Bryn Mawr, Clark, Columbia, Cornell, Dartmouth, Hamilton, Haverford, Hobart, Johns Hopkins, Lafayette, Lake Forest, Leland Stanford Junior, Middlebury, Mount Holyoke, Northwestern, Ohio State, Princeton, Radcliffe, Simmons, Smith, Swarthmore, Syracuse, Trinity, Vanderbilt, Vassar, Wellesley, Wesleyan, Williams, and Yale; the universities of Arizona, California, Chicago, Cincinnati, Colorado, North Dakota, Illinois, Indiana, Kansas, Maine, Michigan, Missouri, Nebraska, New York, Pennsylvania, Texas, Vermont, and Wisconsin; Andover and Hartford Theological Seminaries; Adelphi College in Brooklyn, the Bradley Polytechnic Institute, Peoria, Ill., the Jacob Tome Institute, Port Deposit, Md., New Hampshire College of Agriculture, Durham, N. H., Phillips Exeter Academy, and the Eastern Illinois State Normal School; and in Canada, McGill University, the University of Toronto, and Mt. Allison College, Sackville, N. B.

*Public Libraries:* The public libraries of Boston, Cambridge, Cincinnati, Cleveland, Fitchburg, Hartford, Lowell, New Bedford, Portsmouth, Providence, St. John, N.B., Worcester, and Yarmouth; the Library of Congress; the John Carter Brown Library, Providence; Forbes Library, Northampton; Maine State Library; Millicent Library, Fairhaven; Morrison-Reeves Library, Richmond, Ind.; the Philadelphia Library Company; and the Redwood Library, Newport.

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nish books so expensive or so rarely wanted by scholars that the smaller college libraries cannot afford to own them, would be of the very greatest service to all American libraries, making important works accessible to the smallest and supplementing usefully the collections of the greatest; and I believe that such a library could probably be established here more economically and advantageously than elsewhere. I wish that some generous lover of learning might be induced to take up this project, get it studied carefully by a committee of librarians and scholars, and furnish the means for its realization.

The permanent resources of the Library have been strengthened by the establishment of a new fund resulting from the bequest to the Library of five thousand dollars by Stephen Salisbury, of Worcester, of the Class of 1856. The Library has already enjoyed for fifty years the use of a fund of the same amount given by Mr. Salisbury's grandfather, Stephen Salisbury, of the Class of 1817. The income of the latter fund is restricted to the purchase of books "in the Greek and Latin language, and in other languages illustrating Greek and Latin books." The bequest just received can be used for any purpose connected with the Library.

The accessions to the libraries of the University for the year, and the present extent of each are shown in the following table: —

| Accessions. | Volumes added. | Present extent in | |
|---|---|---|---|
| | | Volumes. | Pamphlets. |
| Gore Hall (College Library) | 14,702 | 478,583 | 331,000 |
| Law School | 6,298 | 102,826 | 11,185 |
| Divinity School | 581 | 36,360 | 9,505 |
| Medical School | 379 | 12,788 | 23,820 |
| Dental School | 8 | 986 | 10,000 |
| Bussey Institution | 145 | 4,621 | 16,491 |
| Museum of Zoölogy | 1,097 | 43,518 | 38,026 |
| Peabody Museum | 115 | 3,472 | 2,435 |
| Astronomical Observatory | 348 | 12,198 | 24,246 |
| Gray Herbarium | 576 | 10,392 | 8,458 |
| Arnold Arboretum | 1,508 | 15,993 | . . |
| Twenty-eight Special Reference Libraries | 2,257 | 46,875 | . . |
| Total | 28,009 | | |
| Deduct, transfers between Gore Hall and Department Libraries | 280 | | |
| Totals | 27,729 | 768,612 | 475,166 |

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The map collection in the College Library contains 25,235 sheets, and is not included in the above enumeration.

The additions to the College Library for the last five years have been as follows: —

| Additions to College Library. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|
| Volumes by purchase or exchange . | 7,731 | 7,870 | 7,746 | 11,012 | 7,520 |
| Do. by binding serials . . . . . | 1,152 | 1,312 | 1,760 | 1,767 | 1,478 |
| Do. by binding pamphlets . . . | 736 | 1,104 | 1,098 | 943 | 852 |
| Do. by gift . . . . . | 7,358 | 12,009 | 6,031 | 4,350 | 4,852 |
| Total volumes added . . . . . | 16,977 | 22,295 | 16,635 | 18,072 | 14,702 |
| Maps in sheets . . . . . | 1,064 | 354 | 2,001 | 1,112 | 512 |
| Pamphlets by purchase or exchange | 1,950 | 1,217 | 1,193 | 2,829 | 1,899 |
| Do. by gift . . . . . | 13,441 | 14,259 | 14,951 | 14,404 | 14,128 |
| Total gifts (vols. and pams.) . . . | 20,799 | 26,268 | 20,982 | 18,754 | 18,980 |

The number of volumes bought is far less than in the previous year, which included Dr. Lichtenstein's purchases abroad, and is also somewhat less than the usual number in recent years. This diminution is due to the reduction in the appropriation for books made by the Library Council, and occurred in spite of the large sums of gift money which were in our hands last year. The greater part of this money, however, was used for the purchase of expensive books, so that it caused no very marked difference in the number of volumes acquired.

Of the additions to the coin collection, the most considerable was a group of 193 coins (silver and copper) received from the Rev. George P. Knapp, of the Mission School, in Harpoot, Turkey. The greater part of the coins are from Asia Minor, and among the 193 pieces, 67 emperors are represented. Almost all are new to the Harvard collection. Mr. Knapp writes to Dr. Storer, the curator of the collection, "I wish I might do more for this coin and medal collection, but, as a matter of fact, my resources are now exhausted. If, however, some friend of the collection would like to put a small fund at my disposal, I should be very glad to do what I could to make further collections. At the same time, I should be glad if a good manual of numismatics were sent me, and it were indicated in this what class of coins are specially desired. Probably in that way I could help a good deal in getting new coins for the collection." Mr. Knapp seems to have somewhat unusual facilities for collecting

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coins, and I wish that I were able to place in his hands the means to gather more.

The year has been remarkable for the number and extent of the gifts of money received, to be spent for special purposes. Those who have for the last two or three years been giving us annually a sum for some special purpose have continued their gifts: Mr. Lawrence S. Butler, '98, of New York, for books on Paris; Mr. Harold J. Coolidge, '92, of Boston, for books on China; Mr. W. Bayard Cutting, Jr., 1900, of New York, for books on Florence; Mr. Ellis L. Dresel, '87, of Boston, for German Drama; Mr. James Loeb, '88, of New York, for labor periodicals; Mr. E. S. Mullins, '98, of Pittsburg, for books on Folklore; Mrs. George A. Nickerson, of Dedham, for books on Folklore; Mr. William Phillips, 1900, of Boston, now of the State Department, Washington, for books on London; Mr. Horace B. Stanton, 1900, of Boston, for books on Molière; Mr. Lucius C. Tuckerman, '97, of Boston, for books on Mexico.

Professor A. C. Coolidge, '87, has spent, in addition to his former gifts, over $1300 for the Hohenzollern Collection, for books on French History, Morocco, Turkey, etc.

Mr. Edwin V. Morgan, '90, United States Minister to Cuba, formerly Minister to Korea, has continued to allow us to add books on Korea at his expense.

Mr. John Harvey Treat, '62, of Lawrence, has added to his former gifts for books on the Catacombs and Christian Archaeology, $250 to be spent for the same purpose.

Mr. Edgar H. Wells, '97, of Boston, has continued his former gifts for special books on English Literature of the 18th century.

Mr. Alain C. White, '92, of New York, has repeated his gift of $200, to be spent for rare books at the discretion of the Librarian.

The Saturday Club of Boston has appropriated to our use from its surplus income, $1,000 to be spent for books, and we have used the money for a number of expensive works — collections of portraits (now made more available than before through the "A. L. A. Portrait Index"), works on illumination, reproductions of Dutch paintings, and the expensive but indispensable catalogue of the Church library of Americana.

From Mr. Ernest B. Dane, '92, of Brookline, we have received $5,000, to be spent on English Literature and English History. This generous sum has been divided among different members of the English Department, to be used for special classes of literature. Professor Kittredge has ordered English Literature before 1660, and

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works on Shakespeare; Professor Baker, English plays before 1660; Mr. Edgar H. Wells, English Literature from 1660 to 1780; Professor Neilson, modern English Literature, 1780–1895; Dr. C. N. Greenough, books of "characters" and periodicals; Professor Robinson, Celtic literature; and Dr. Merriman, English History. Other subscriptions through Dr. Merriman, for the purchase of books of English History, have been received, amounting to $250.

Mrs. E. A. Hills and Mr. George E. Hills, '97, of Boston, have contributed to the purchase of books on the Dutch East Indies.

Mr. W. W. Naumburg, '89, of New York, has given $100 for books on Shakespeare, and Mr. Frank G. Thomson, '97, of Philadelphia, $200 for English Literature.

Subscriptions for the purchase of books on Banking, amounting to $137, have been received through Assistant Professor A. P. Andrew; and for Economic literature, amounting to $105, through Professor Taussig.

Mr. W. Bayard Cutting, Jr., in addition to his gift for books on Florence, has interested himself during the last winter in collecting books relating to Switzerland, and several shipments have been received, amounting in all to 352 volumes. Mr. Cutting spends his winters at St. Moritz, and has given his personal attention to the selection of these books, with the result that what he has sent has been carefully chosen and has included many important sets of historical documents. A part of the books were paid for by Professor A. C. Coolidge; but the greater part come to us as a gift from Mr. Cutting.

Dr. Hiram Bingham, Jr., Curator of South American History and Literature, spent a part of last winter travelling in South America, and while there collected a large number of books for the Library. These are in part a gift from himself, in part a gift from Professor A. C. Coolidge, and the remainder were purchased from an appropriation made by the Library. The collection, all of which has not yet reached us, contains many works which we should not have been able to obtain in any other way, and which we acquired at very low prices.

A collection of Cuban works, numbering about one hundred volumes and pamphlets, and including many rare early works, was bought for us by Mr. Enrique de Cruzat Zanetti, '97, of New York.

From Mr. Martin Brimmer's library, by bequest of Mrs. Brimmer, we received twenty-four volumes of rare books, many of them in handsome bindings. They included first editions of Voltaire, Rousseau, Montesquieu, and Montaigne, the Aldine editions of Horace and Petrarch, and other treasures.

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From the estate of Professor Ephraim W. Gurney, a final instalment of his library, numbering 242 volumes, has been received. This makes the total number of volumes received from Professor Gurney's library, 7,750.

Mr. Joseph H. Clark, '57, of Boston, has sent us many volumes of recent French, Italian, and Spanish fiction, and has also provided for the expense of binding the same.

Mr. H. Nelson Gay, of Rome, Curator of Italian History of the 19th Century, has continued to send us books and pamphlets on the Risorgimento period, and would have spent to excellent advantage the Library's modest appropriation for this subject as in former years, had it not been necessary to suspend the appropriation for the current year.

Miss Woodman, of Cambridge, has allowed the Library to select from her father's valuable collection of pamphlets, systematically preserved through many years, all that would be useful for our shelves.

Mr. N. V. Tchaikovsky, a prominent Russian revolutionist lately resident in London, presented 162 volumes and pamphlets, including a full set of the periodical, "Revolyutsionnaya Rossiya," being everything published by the Socialist-Revolutionary Party since 1902.

From the Russian Goverment, through the United States Minister, Hon. George von L. Meyer, the Library received a collection of the documents and proceedings of the Duma; also the publications of the first general census of Russia, that of 1897, and Statistics of Russian Railways.

One of the most interesting and precious acquisitions of the year was a perfect set of the original issues of "The Spectator," a copy which formerly belonged to Edmund Malone, the actor. Mr. W. R. Castle, Jr., the Assistant Dean, was chiefly instrumental in procuring these volumes for the Library, and shared with Professor Kittredge and Messrs. C. G. Osborne, 1909, and H. E. Widener, 1909, a part of the expense, the remainder being made up from the Dane gift and from the income of the Child Memorial Fund.

Mr. Henry Arthur Jones, of London, when he visited the College in November, 1906, brought with him, as a gift, his vellum copy of the Kelmscott "Chaucer," the greatest printing achievement and the last finished work of William Morris.

The Library has received numerous other valuable and interesting gifts, but they are too many to be mentioned in detail. A more complete statement of the gifts of money received will be found in the Treasurer's report.

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The purchases of the year have naturally included a very unusual number of rare and precious volumes in early English literature, bought from Mr. Dane's gift. The additions in the field of French History have also been extensive. Professor Coolidge, on being absent from his work for a second year on the Hyde lectureship in France, authorized us to buy at his expense, $1,000 worth of books on French History, on condition that the Corporation would appropriate another $1,000, to be spent for the same purpose. Only a part of the $2,000 thus made available has been spent during the past year, but the remainder will probably be used during the year now current. In selecting books to be bought, we have profited by the advice of Professor Haskins, and have bought mainly books on early and local French History, with the addition of a few important sets. To the Hohenzollern Collection 762 volumes have been added, many being in continuation of sets already bought.

An interesting collection of material on anagrams, gathered by the late Walter Begley, Vicar of East Hyde, England, an author of works on anagrams, was bought at a moderate price, and constitutes a unique collection relating to a small, but interesting, subject.

Under the appropriation for Folklore, and from the gifts of Mrs. Nickerson and Mr. Mullins, we have bought a number of early books on alchemy and witchcraft and several collections of ballads and chap-books. Scotch history and literature have been further added to from the gift of Mr. Alexander Cochrane, reported last year. The larger part of Mr. Phillips's gift for books on London has been spent for works on the London city companies. A number of books, copies of which had formed part of John Harvard's library, have been picked up from time to time at trifling expense, and have been paid for by an anonymous friend.

The greater part of the income of the Norton Fund was needed to pay for a manuscript of Donne's Poems, received the previous year; but several minor works by Donne have been bought, and a fine copy of Eusebius, "De præparatione evangelica," printed by Jansen in Venice in 1470.

A list of some of the more important recent accessions to the Library is given as an appendix to this report in its separately printed form.

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SPECIAL REFERENCE LIBRARIES.

The present extent of these libraries is as follows: —

| Special Reference Libraries. | Permanent. | On Deposit. | Totals. |
|---|---|---|---|
| 1. Chemical Lab. *Boylston Hall* | 1,052 | 1,060 | 2,112 |
| 2. Physical Lab. *Jefferson Phys. Lab.* | 53 | 369 | 422 |
| 3. Botanical Lab. *University Museum* | 589 | 124 | 713 |
| 4. Geological Lab. *Do.* | 124 | . . | 124 |
| 5. Mineralogical Lab. *Do.* | 546 | 231 | 777 |
| 6. Phys. Geography Lab. *Do.* | 344 | 226 | 570 |
| 7. Zoölogical Lab. *Do.* | 278 | . . | 278 |
| 8. Classics. *Harvard Hall 3* | 4,071 | 148 | 4,219 |
| 9. History. *Harvard Hall R. R.* | 3,393 | 114 | 3,507 |
| 10. United States History. *Harvard Hall R. R.* | 921 | 8 | 929 |
| 11. Political Economy. *Do.* | 1,417 | 21 | 1,438 |
| 12. Social Ethics. *Emerson Hall.* | 2,222 | 6 | 2,228 |
| 13. Child Memorial (English). *Warren House* | 4,601 | 90 | 4,691 |
| 14. Lowell Memorial (Romance). *Do.* | 1,592 | 6 | 1,598 |
| 15. German. *Do.* | 1,345 | . . | 1,345 |
| 16. French. *Do.* | 2,603 | . . | 2,603 |
| 17. Sanskrit. *Do.* | 945 | 30 | 975 |
| 18. Semitic. *Semitic Museum* | 1,575 | . . | 1,575 |
| 19. Mathematics. *Sever 22* | 660 | 80 | 740 |
| 20. Mining and Metallurgy. *Rotch Laboratory* | 49 | 21 | 70 |
| 21. Engineering. *Pierce Hall* | 6,836 | 527 | 7,363 |
| 22. Music. *Holden Chapel* | 479 | . . | 479 |
| 23. Philosophy (Robbins Library and Psychol. Lab.). *Emerson Hall.* | 2,844 | 43 | 2,887 |
| 24. Education. *Lawrence Hall* | 5,904 | . . | 5,904 |
| 25. Fine Arts (incl. Gray and Randall Coll.). *Fogg Museum* | 994 | 3 | 997 |
| 26. Architecture. *Robinson Hall* | 1,146 | 13 | 1,159 |
| 27. Preachers' Library. *Wadsworth House* | 95 | . . | 95 |
| 28. The Study. *Phillips Brooks House* | 59 | . . | 59 |
| 29. Social Service Committee. *Phillips Brooks House* | 128 | . . | 128 |
| Totals | 46,875 | 3,110 | 49,985 |

The total number of volumes added to these special libraries in the course of the year has been 2,235, the largest additions being in History, 268; Social Ethics, 412; Engineering, 214; Education, 261; Philosophy, 274 (from the Robbins gift).

We are again indebted, as in two previous years, to Dr. K. G. T. Webster, who bore the expense of opening the libraries in Warren House during the evening from the close of the spring recess to the end of the year.

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USE OF BOOKS IN THE COLLEGE LIBRARY.

The following table shows the use of books at Gore Hall in 1906–07 as compared with previous years: —

| Use of Books. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|---|
| 1. Books lent . . . . . | 63,673 | 58,443 | 63,183 | 62,861 | 59,021 | 56,875 | 59,254 |
| 2. Used in the building . (Recorded use only.) | 24,180 | 22,583 | 24,924 | 23,111 | 26,565 | 26,558 | 24,351 |
| Total . . . . . | 87,853 | *81,026 | 88,107 | 85,972 | 85,586 | 83,433 | 83,605 |
| 3. Over-night use of Reference Books. | | | | | | | |
| Gore Hall . . . . . | | | 386 | 3,990 | 6,485 | 5,662 | 6,107 |
| Harvard Hall . . . | 13,566 | 13,594 | 12,861 | 12,644 | 14,268 | 11,452 | 11,267 |

The increase in books lent is probably due to the fact that more pains have been taken to place interesting books, both new and old, on the open shelves in the delivery-room.

In June, during the examination period, we allowed reserved books to be taken out every night for over-night use, instead of on Saturday evening only, as is the custom during the remainder of the year. This was a return to the former practice of the Library, before the reading-room was kept open in the evening. It apparently gave general satisfaction, and will be tried again this year during both the mid-year and the final examinations. The chief drawback to the practice is the occasional difficulty in getting books back promptly in the morning; but the users of the reading-room, realizing that the plan was on trial and would be discontinued if unsuccessful, took special pains to make it work smoothly.

At the request of the Committee on the Summer School, the reading-room in Harvard Hall was kept open both day and evening during the session of the Summer School. It is doubtless a much cooler place in which to work than the general reading-room in Gore Hall, but the records show that the evening use was, for the greater part of the time, very small, while the attendance during the day varied from twenty to sixty.

Of the constant use of the reserved books in the reading-room, and of the collections of reference books, periodicals, and United States documents, freely accessible to all, no record is possible.

* The decline in the figures for this year is probably to be ascribed to errors in the statistics.

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The books shelved in the reading-room, together with those in the various special reference libraries in Harvard Hall, Warren House, and elsewhere, amount altogether to over 74,000 volumes to which direct access can be had by all students to whom they are of value. In addition the library of the Harvard Union now offers to its members over 7,000 books, mainly literature, biography, history, travel, and sport.

The extent of these open reading-room collections and their growth is shown in the following table: —

| Open Collections. | 1902-03. | 1903-04. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|---|---|
| Bound Periodicals | 3,266 | 3,341 | 3,516 | 3,288 | 3,354 |
| Reference Books | 4,471 | 4,645 | 4,685 | 4,800 | 4,904 |
| Reserved Books | 10,398 | 10,514 | 10,904 | 11,055 | 11,125 |
| U. S. Documents | 4,523 | 4,300 | 4,481 | 5,199 | 5,355 |
| Totals | 22,658 | 22,800 | 23,586 | 24,342 | 24,738 |

Cards of admission to different sections of the book-stack continue to be given, on recommendation of an instructor, to all advanced students who need to go directly to the shelves for purposes of investigation in connection with their work. Such students have the same facilities for the examination and study of all the resources of the Library, in their own departments, that the officers of instruction enjoy. The use of these cards of admission to the book-stack is shown in the following table: —

| Admission to the Book-Stack. | 1899-00. | 1900-01. | 1901-02. | 1902-03. | 1903-04. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|---|---|---|---|---|
| History | 112 | 81 | 90 | 118 | 92 | 122 | 105 | 117 |
| Science | 30 | 36 | 37 | 45 | 38 | 28 | 36 | 36 |
| Art and Archaeology (including Music) | 33 | 33 | 55 | 46 | 42 | 57 | 28 | 47 |
| Literature | 85 | 74 | 80 | 125 | 144 | 107 | 131 | 129 |
| Classics | 70 | 58 | 70 | 73 | 62 | 57 | 58 | 50 |
| Philosophy | 19 | 22 | 27 | 31 | 22 | 18 | 11 | 12 |
| Theology | 1 | 1 | 14 | 2 | 9 | 8 | 13 | 6 |
| Economics and Sociology | 13 | 13 | 16 | 33 | 26 | 38 | 23 | 46 |
| Education | 4 | 7 | 4 | 25 | 10 | 11 | 9 | 9 |
| Geography | 3 | 9 | 15 | 6 | 7 | 5 | 3 | 8 |
| Publ. of Learned Societies | .. | 16 | 8 | 7 | 6 | 5 | 1 | 1 |
| Total cards given | 370 | 350 | 416 | 511 | 458 | 456 | 418 | 461 |
| Total individuals admitted | 320 | 257 | 301 | 366 | 315 | 354 | 335 | 356 |
| Total times of use | 6,898 | 6,067 | 5,551 | 6,244 | 6,413 | 7,172 | 6,124 | 5,992 |

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The number of individuals admitted is less than the number of cards given out, because the same person often receives permission to use different parts of the book-stack.

As a result of the building of the new addition, artificial light now has to be used at many of the tables in the stack hitherto well lighted from the windows, but on the fifth floor, a few well lighted additional tables have been placed in the gallery which opens from this floor, and on the third floor, additional tables will be placed on the south side of the stack, in place of the map cases, the maps from which have now been removed to the Map Room. On the second floor some table space will also be gained on the south side when the wooden cases which have been built in here from time to time are pulled out and the old collating-room changed.

During the summer of 1907, in addition to the students of the Summer School, 54 professors and instructors from 36 different colleges came to Cambridge for purposes of study, and were made welcome in the Library. This number is naturally somewhat smaller than in other recent years, because the Library was closed during part of the summer, and notice of the intended closing had been widely circulated. 1,466 volumes have been sent from the Library to 82 different colleges, schools, and public libraries, and in some cases to individuals residing at a distance. This is a somewhat smaller number of volumes, but a larger number of institutions, than was reported last year. So far as is known, no serious inconvenience has been caused to scholars working in this Library by the temporary withdrawal of books wanted elsewhere, and it is a satisfaction to be able to place books which are not often wanted here in the hands of persons who actually need them.

Radcliffe College has borrowed 980 volumes for the use of its students. Application for these books is made through the Librarian of Radcliffe, and the books are carried back and forth between Radcliffe College and the Harvard Library by a messenger. Radcliffe students also visit the Library, and have the use of one table in the smaller reading-room. For use at this table, 955 books were sent for from the stack and 1,081 volumes were taken from the reserved shelves in the reading-room. In special cases, Radcliffe students are also allowed access to the stacks, but the pressure for reading space in the stack is so great that their number is necessarily limited. It is to be expected that the Radcliffe library, after it has occupied its new building, will itself be able to offer almost everything which is to be found on our "reserved" shelves, so that Radcliffe students will have small occasion to ask for these books which are in almost constant use by our own students.

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The Sunday use of the reading-room is shown in the following table. The room is open, to readers only, every Sunday in term-time from one to half-past five in the afternoon.

| Sunday Use. | 1899–00. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|---|---|
| Sundays open . . . . | 35 | 35 | 36 | 35 | 36 | 34 | 34 | 34 |
| Users . . . . . | 4,846 | 5,471 | 4,909 | 5,073 | 4,678 | 4,953 | 4,737 | 4,623 |
| Average . . . . . | 138 | 156 | 136 | 144 | 129 | 145 | 139 | 136 |
| Highest number . . . | 236 | 226 | 225 | 227 | 173 | 187 | 228 | 207 |

In November, 1906, a petition was presented to the Library Council, signed by twenty-five officers of the University, asking that the Library stacks might be open during the evening hours to members of the Faculty and to such instructors as might apply for the privilege. It was represented that the closing of the stacks at a quarter after five was a distinct hardship, breaking up and curtailing the late afternoon and evening hours — the only periods of consecutive study which most members of the Faculty possess. Inquiry was made of other leading universities — of Columbia, Cornell, University of Michigan, University of Pennsylvania, Princeton, and Yale — and it was learned that the hours of opening of all these libraries were more liberal than those of the Harvard Library, extending from 8 or 8.30 in the morning until 10 or 11 o'clock at night, and that in every case but one, the delivery-desk and the book-stacks were open during the same hours as the general reading-room. On January 1, 1907, with the approval of the Library Council, the book-stack was opened to members of the Faculty of Arts and Sciences and other instructors (including assistants and Austin Teaching Fellows) during the evening hours when the Library is open. In order not to increase the expense for service, those persons who wished access to the stacks in the evening were required to obtain in advance cards of admission to be shown to the night janitor, since he could not be expected to know them personally. Access to the stacks during the evening has doubtless been a real convenience to those who have taken advantage of it, but it is found that no large number of persons care to make use of the evening hours.

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### SHELF DEPARTMENT.

Mr. Frank Carney, who has charge of the current work of the shelf department, reports 15,504 volumes permanently located in the stack during the year. Of this number, 13,683 have been added to classes previously arranged, and 1,821 belong to classes newly classified in the course of the year.

Only a little advance from year to year in extending the classification is at present possible. The groups arranged last year were (1) the Dutch East Indies, a group appended to the history of the Netherlands, 245 volumes; (2) the Norton Collection, 571 volumes; and (3) the remaining divisions of Africa — namely, general works, Tropical Africa, and South Africa, 1,005 volumes.

The reclassification and renumbering of Swiss History, formerly included with German History, was made necessary by the reclassification of German History. The change was the more desirable because of the considerable additions to this subject which the Library has been receiving from Mr. W. Bayard Cutting, Jr. The reclassification of certain old text-books, withdrawn from the groups with which their subject matter connects them, and brought together in a text-book collection by themselves, was spoken of last year, but the count of volumes is included in this year's report, the books on Swiss History and the text-books together amounting to 977 volumes.

During the summer, Dr. Lichtenstein reclassified and renumbered the whole collection of French History. This renumbering, as explained in an earlier report, is made necessary by the character of the system employed many years ago, when the books were first classified. It was particularly desirable to carry it out at the present time, because we are just now adding extensively to the French History collection, and the new accessions should receive permanent numbers, rather than numbers which must soon be changed. The shelf-list for these books is now being written, but the shelf-marks on the cards in the catalogue have still to be changed. The number of volumes will, therefore, be reported in next year's statistics.

The department seems to have had its work better in hand than during any previous year. At the beginning of each month, the average number of volumes on hand has been 528, the corresponding number in 1905–06 having been 966, and in 1904–05, 1,374. This better showing is no doubt largely due to the fact that all the books relating to European History (3,239 in number) have been passed over to Dr. Lichtenstein, who is in charge of that subject.

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Some improvement in the condition of the shelves has been attained by overhauling the more crowded classes, especially the Greek and Latin authors, and taking out the folio volumes, to be separately shelved. This has permitted a gain of an additional shelf here and there, which has made it possible, in some cases, to rearrange sets which we had recently been obliged to place in double rows on the shelves. The number of shelves containing double rows has thus been reduced from 700 to 645. In the course of the year, the contents of 13,791 shelves have been shifted, in order to find room for growth. This means that about 350,000 volumes have had to be moved, in order to find shelf room for the 14,000 volumes added. Nothing could tell more impressively the crowded condition at which our shelves have arrived. We have not, however, been obliged this year to add to the collections stored outside Gore Hall, and with the small amount of additional shelving contained in the basement of the new addition, we shall probably not have to remove anything during the year now beginning.

Mr. David Heald, who has been connected with the shelf department for two or three years, was transferred, December 1, 1906, to the library of the Medical School, to superintend the installation and reorganization of the several libraries of the School in their new quarters. He accomplished the task successfully, and returned to the Library service on September 1.

The number of volumes reported missing at the annual examination this summer was unusually large. Eighty-nine volumes were missing from the shelves of the reading-room and the open shelves of the delivery-room, and 175 volumes from the book-stack. This is a good deal more than twice the number reported in any of the last six years, and has never been exceeded since a record of losses has been kept. Forty volumes missing in previous years have been found, the total net loss of the last twenty-four years being 1,219 volumes. A careful examination of the list of missing books gives no clue to the cause of the increase this year. The fact that the loss is so much larger from the stack than from the open shelves in the reading-room would indicate that a considerable part of it is due to carelessness on the part of officers and students admitted to the stack, in not charging books borrowed.

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CATALOGUE DEPARTMENT.

Mr. Currier, in charge of the catalogue department, presents the following figures in regard to the work of this department.

| Catalogue Work. | 1902-03. | 1903-04. | 1904-05. | 1905-06. | 1906-07. |
|---|---|---|---|---|---|
| Titles catalogued for College Library: | | | | | |
| Full and complete work | 8,517 | 8,842 | 7,401 | 7,860 | 8,523 |
| Continuations, analytical entries, etc. | 4,450 | 5,573 | 6,319 | 5,960 | 6,634 |
| Incomplete work | 3,373 | 6,301 | 10,442 | 6,295 | 6,454 |
| Total | 16,340 | 20,716 | 24,162 | 20,115 | 21,611 |
| Titles for Dept. and Special Libraries | 3,846 | 4,121 | 3,562 | 4,867 | 4,422 |
| Total titles catalogued | 20,186 | 24,837 | 27,724 | 24,982 | 26,033 |
| Cards added to Catalogue: | | | | | |
| Printed cards — | | | | | |
| College Printing Office | 18,135 | 11,827 | 6,026 | 7,243 | 6,270 |
| Library of Congress | 5,440 | 7,011 | 7,981 | 8,558 | 9,216 |
| A. L. A. Publishing Board | 4,076 | 5,916 | 3,460 | 2,457 | 3,195 |
| Total | 27,651 | 24,754 | 17,467 | 18,258 | 18,681 |
| Written cards | 6,728 | 15,570 | 23,211 | 22,168 | 22,766 |
| Total | 34,379 | 40,324 | 40,678 | 40,426 | 41,447 |

A slight increase is to be noticed in each of the three counts of titles catalogued for the College Library, making a total increase of 1,496 titles. The greatest addition is in the number of titles catalogued in full and completely. The decline in the number of cards printed for us, and the increase in the number of written cards, is to be regretted. The fact that we are now sending our printed titles to two other libraries — to the Library of Princeton University and to the Library of Congress — makes it desirable to increase, rather than to cut down, the proportion of printed work. For several years, we have sent one card to the Library of Congress for each title printed here, and have received from that Library, in exchange, the galley strips of the printed cards it issues. Since February, 1907, we have sent to Princeton, at the request of the Princeton Library, four cards for each title printed for us. In both cases, the stock used is furnished by the library receiving the cards.

The "incomplete" work recorded is of two kinds, a part entered on the official catalogue only, and a part entered also, in somewhat summary fashion, on the public catalogue. For many years, when

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it has been necessary to abbreviate our work in any way, in order to keep up with increased accessions, the practice has been to enter on the official catalogue only anything which could not be catalogued in full. The result is that large numbers of German dissertations, current pamphlets, and certain large collections, such as the Riant library and parts of the Von Maurer library, are now recorded only on the official catalogue, where they are found, to be sure, by employees of the Library, but are apt to escape the notice of officers and students who are in the habit of depending on the public catalogue. The amount of work done in this way having increased so much during the last few years, the inconvenience of having no record of such titles on the public catalogue has been more and more keenly felt, and in work lately undertaken we have therefore tried to add to the entry on the official catalogue a simple, but in most cases probably a sufficient, entry on the public catalogue, repeating the title under subject as well as author, when this could be done without any prolonged examination. The cards used for this work have a red edge, so that they can be easily picked out at some future time; but it is probable that when revised, many of these cards will be found to need but little change or correction.

Mr. Currier reports two recent experiments on the cost of doing this "temporary" cataloguing. "The first experiment found the cost to be about 15 cents per title and the second just 13 cents. In the first experiment the cost was increased by the revision which the work was given. This revision has now been reduced to its lowest terms. In this work, the titles are given all proper references and some degree — frequently complete — of subject classification. Bibliographical investigations and analytical work are largely dispensed with."

Apart from current work, about 75,000 titles have now accumulated, either not entered on our catalogues or entered in such a way that revision is either necessary or desirable. Of this number, about 10,000 titles are catalogued by the "temporary" method described above. Some 46,000 titles have been entered on the official catalogue only. It is estimated that perhaps 10,000 titles are included in pamphlet boxes and in pamphlet volumes bound up many years ago without passing through the cataloguers' hands. In the special collections of Slovak and Judeo-German literature, there are perhaps 4,000 uncatalogued titles. The analytical work, which would have been desirable, but which we have been forced to pass over, now amounts to perhaps 6,000 titles. A part of the work included in this rather discouraging summary of arrears is not press-

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ing, but probably more than half constantly gives rise to some degree of difficulty or uncertainty in determining with accuracy what is actually in the Library.

The new section of catalogue case added in the delivery-room occasioned an extension of the card catalogue. From a measurement of the cards made in connection with this work, it is estimated that the number of cards in the public catalogue is, on the author side, 668,000; on the subject side, 600,000; total, 1,268,000.

Mr. Currier reports the printing of a seventh supplement to the Index to the Subject Catalogue, and he adds: —

"The time is approaching when the Subject Index should be reprinted. But few copies are left, and the supplementary entries on interleaved pages make the volumes difficult to use. From now until this work is taken up, opportunities should be grasped for improving the catalogue. Frequently smaller topics can be straightened out without much difficulty, even though far-reaching changes cannot be undertaken. A regrouping of the sociological sections would be most useful, Mathematics should be overhauled somewhat, and Politics and Legislation should be thoroughly revised. The long-talked-of rearrangement of cards under History would be of great use. The present chronological arrangement, under places, serves but poorly the needs of the public, and for it should be substituted an arrangement by periods.

"During the past year, we have been able to make several minor revisions, in the headings Forestry, Almanacs, International Exhibitions, Finance of Cities, Christian Science, Theosophy, Dutch East Indies, etc."

The experiment begun about twenty years ago with a new form of catalogue, which it was thought might prove more convenient than the card catalogue, has at length been discontinued, its fate having been considered and re-considered many times during the last few years. This is what we have called the Leyden Catalogue, since it is modelled after a form of catalogue used at the University of Leyden. It consists of slips, larger in size than the ordinary catalogue card, bound together at the right-hand end into little volumes by a device which permits additional slips to be inserted at any point. Mr. Winsor hoped that these volumes might be found to be a better solution of the catalogue question than the card catalogue; but in practice, the fact that it cannot easily be managed with one hand, leaving the other hand free to use a pencil, seems to have been the chief element in making it unpopular, and for many years it has been

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of little real service to us. For some years after it was started, when the Library printed the greater part of its titles, it was practically complete for all recent accessions; but now that so many titles are received from the Library of Congress, and that the Library itself prints a smaller proportion of the titles catalogued here, it has become less and less complete, and is therefore used with less confidence. It will be quite possible in the future, if we should need to duplicate any part of our catalogue, to cut these slips down to the ordinary catalogue size, and we are retaining them with this in mind; but we have removed the set of volumes from the Reading-room and shall not try any longer to keep them up to date.

### ORDERING DEPARTMENT AND FINANCIAL CONDITION.

The following table shows the income of our book funds, receipts from other sources for the purchase of books, and expenditure for books during the last six years.

| Income and Expenditure. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|---|
| From book funds, — | | | | | | |
| Balance from previous year . | $4,534 | $4,036 | $3,208 | $4,074 | $4,781 | $4,520 |
| Income of the year . . . . | 19,972 | 19,446 | 19,992 | 19,560 | 19,063 | *20,899 |
| Total available . . . . . | 24,506 | 23,482 | 23,200 | 23,634 | 23,844 | 25,419 |
| Spent for books . . . . . | 20,470 | 20,274 | 19,126 | 18,853 | 19,324 | 19,451 |
| Balance to next year . . . . | 4,036 | 3,208 | 4,074 | 4,781 | 4,520 | 5,968 |
| Special gifts, sales, etc. — | | | | | | |
| Balance from previous year . | 1,932 | 2,276 | 1,835 | 1,707 | 2,814 | 4,279 |
| Received during the year . . | 3,411 | 4,457 | 4,406 | 4,611 | 9,484 | 10,765 |
| Total available . . . . . | 5,343 | 6,733 | 6,241 | 6,318 | 12,298 | 15,044 |
| Spent for books . . . . . | 3,067 | 4,898 | 4,534 | 3,504 | 8,019 | 10,764 |
| Balance to next year . . . . | 2,276 | 1,835 | 1,707 | 2,814 | 4,279 | 4,280 |
| Total spent for books, — | | | | | | |
| College Library . . . . . | $23,537 | $25,172 | $23,660 | $22,357 | $27,343 | $30,215 |
| Department Libraries (books ordered through Coll. Lib.) | 7,245 | 7,389 | 6,214 | 5,623 | 9,357 | 7,642 |
| Total . . . . . | $30,782 | $32,561 | $29,874 | $27,980 | $36,700 | $37,857 |

At the beginning of the year, the Council anticipated a serious reduction in the amount of money available for books, and accordingly made its appropriations on a much smaller scale than usual, — on a basis of there being only $7,000 free for new orders, instead of

* Includes $620 accumulated income of the Boott Fund not previously reported.

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$9,000, as in the previous year, or $11,000 two years before.* This reduction seemed necessary both because an unusually large number of unpaid bills had been carried over from the end of the previous year to the beginning of this (not shown by the Treasurer's balance in the above table) and because it was expected that the Corporation would be obliged to transfer to administration at least a thousand dollars from income ordinarily devoted to books. In fact, the expected transfer did not take place on the Treasurer's books, and the rate of interest on investments increased, so that the figures in the table show an increase. Expenditure, however, was curtailed in accordance with the Council's appropriations, and the balance carried over is correspondingly larger. This balance, moreover, is almost entirely available, there having been but few unpaid bills on hand at the beginning of the year.

The work of the ordering department, in charge of Mr. Potter, is summed up in the following table, which gives the figures of the last two years and the averages of three previous five-year periods.

| Work of Ordering Department. | 1890–95. Average. | 1895–1900. Average. | 1900–05. Average. | 1905–06. | 1906–07. |
|---|---|---|---|---|---|
| New orders, — | | | | | |
| Total received and examined . . . | 5,132 | 7,327 | 12,275 | 9,773 | 9,046 |
| Already owned or ordered . . . . | 1,193 | 1,725 | 4,142 | 2,468 | 3,445 |
| Forwarded . . . . . | 3,800 | 5,036 | 7,796 | 7,038 | 6,454 |
| Estimate of cost, — | | | | | |
| For the College Library . . . . . | $9,079 | $10,145 | $14,903 | $12,642 | $16,732 |
| For Departments . . . . . | 2,902 | 3,223 | 3,710 | 5,092 | 4,168 |
| Total estimated cost . . . . . | 11,981 | 13,368 | 18,614 | 17,734 | 20,900 |
| Shipments received from abroad . . | 28 | 33 | 68 | 64 | 51 |
| †No. of vols. bought for College Lib. | 4,416 | 5,736 | 7,538 | 11,012 | 7,520 |
| ‡Total gifts examined and passed on | 16,050 | 16,455 | 21,582 | 17,754 | 18,980 |

In comparing these figures with those of the previous year, it will be noticed that, while the number of new orders received is considerably less (due to the general decrease in the amount of the appropriations), the estimate of cost is very much larger. This is due, on the one hand, to the fact that an accumulation of about one thousand

* Periodicals, outstanding orders, continuations, etc., are separately estimated.

† Excluding volumes formed by binding periodicals and pamphlets, but including volumes received on exchange account from other libraries.

‡ Including both volumes and pamphlets. See p. 199.

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titles, handed in last year, were looked up and forwarded this year; and on the other hand, to the exceptionally large amount of gift money to be expended, which was used in large degree for expensive works, thus increasing the average cost of orders sent forward. Of the $16,732 estimated, $7,051 was on Library funds, and $9,681 was charged to various special gifts. The number of volumes bought for the College Library is much nearer the usual average, last year's figure being very much increased by Dr. Lichtenstein's purchases in Europe.

In regard to duplicates obtained unintentionally, Mr. Potter reports: "Forty-one unintentional duplicates were bought at a cost of $149.50. This is more than the year before, when the records (perhaps incomplete) showed only 34; but it is less than in 1904–05, when 56 were bought. The percentage of duplicates to the number of orders looked up was .0045. Unfortunately, several of these duplicates were rather expensive sets and the total cost was more than in any recent year. About half of them were practically unavoidable. Several are traceable to the various methods of "short cataloguing," which leave many pit-falls for the unwary searcher. During the year, we disposed of a large number of duplicates, some sold for us by the Coöperative Society, some sent to other libraries on exchange, and others given to the University of Tennessee and to one or two other college libraries."

Mr. Potter calls attention again to the need of employing more assistance on the Library accounts. His complaint is well grounded, and I expect that, with some re-arrangement of duties among the staff during the coming year, it will be possible to employ one person as an accountant, whose chief work it shall be to attend to the accounts and forward bills promptly for payment. Mr. Potter speaks of the subject as follows: —

"In my report of last year, I spoke of the unsatisfactory condition of the Library accounts, — the long delays in the payment of bills and the difficulty in securing frequent balances for use in assigning funds to new books. I regret to report that there has been no improvement in these matters this year. The one regular assistant, with more than half of her time needed for work in other departments, could not begin to do all the work on the accounts, and the help that I was able to assign to her from other members of the department was not sufficient either in quantity or quality to secure accuracy and promptness. Not only were the payments and balances constantly behind during the year, but at the end of the year it was found that there were numerous errors in the figures and several weeks of valuable time were wasted in locating and correcting them. Book-keeping is not work that can be done in odd

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moments by a person subject to constant interruptions and calls to other duties. It is true that seventeen years ago, when I first entered the Library, I found no difficulty in keeping these accounts as part of my other work and giving to them not more than five or six hours a week. But conditions have changed since them. It is not so much that the total expenditure has increased, being about double what it was then, but that the accounts have grown much more complex. Then there were 47 different accounts, divided as follows: Funds, 25; Gifts, 5; and Departments, 17. Now we have 39 Fund accounts; 57 Gift accounts; and 57 Department accounts, — a total of 153. The number of requisitions drawn last year was 465 against 309 seventeen years ago. These last figures do not properly represent the increase in work, as, with the delay in payments, many small bills are combined on one requisition. It would, I think, be a real economy for the Library to employ a trained book-keeper to attend to these accounts. Of course, if this were done, such a person would naturally have charge not only of the book accounts, but of the petty cash account (fines, etc.), of the pay-roll, and perhaps of the various statistics now kept by the different departments. I strongly recommend this matter for consideration."

### STAFF.

There have been more than the usual number of changes in the staff during the past year. These changes usually diminish efficiency, at least for the time being, but they are unavoidable and, to some degree, in the long run beneficial. For, when it is seen that service in this Library opens the way to a better position in some other library, the attractiveness of the Library service is increased, and it is the easier to secure as our assistants young men and women of ability. Mr. C. A. Read, of the Class of 1902, who, with the exception of a few months at the Arnold Arboretum, had been in the employ of the Library continuously since his graduation, left us on the first of March, 1907, to become librarian of the University of Cincinnati.

Dr. Lichtenstein's appointment as Assistant in charge of European History was mentioned in my last report. His duties were to be somewhat different from those of any other assistant in the Library, since he was to give his services alike to the ordering department, the shelf department, and the catalogue department, in respect to the books relating to the subject under his charge. This new method of work gives fair promise, I think, of being successful in the end, but its trial so far has been somewhat incomplete. During the early part of the year, Dr. Lichtenstein's time was taken up with completing the work on the Hohenzollern Collection, on which he had previously been engaged. It was not until the first of November

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that he began regular work on the plan outlined. In the spring, his time was necessarily broken up by private work connected with preparing himself for examinations for the degree of Ph. D., and on the first of June, he began work on the re-classification of French History, which soon absorbed all his time for the remainder of the year.

He reports that only 193 orders were given him to look up for the Order Department, of which number 71 proved duplicate. On the other hand, he examined a large number of booksellers' catalogues, checking titles for the Hohenzollern Collection and for French History. In the course of this task, he marked and looked up over 800 titles, and sent forward as orders, 307. Mr. Potter reports that it was of advantage to turn the work over to him when any considerable number of orders were to be looked up at once, but that orders coming in in small numbers were more conveniently handled by his usual assistants. It should be noted also that with reduced appropriations, the money available for purchases, except in French History, was exhausted early in the year.

Dr. Lichtenstein reports that 3,380 volumes, dealing with subjects of European History, were turned over to him by the Shelf Department in the eight months under review, and that all except 141 were classified and sent along before the end of the statistical year. In addition to the 3,239 thus classified, 306 volumes came up for re-classification, not counting the work done on the general collection of French History. It was in this department that Dr. Lichtenstein's work was most complete and effective.

In regard to the practical advantage of the attempt to combine cataloguing with the other processes, Mr. Currier reports as follows: —

"The result of the year's experience shows that it is more difficult to turn over a given class of books to a single person for independent treatment in cataloguing than seems to be the case in the shelf arrangement. On the shelves, each collection forms a physical entity, and variation of method in any one group usually makes little or no confusion. In the card catalogue, however, there is a much greater interdependence of parts and, in consequence, greater uniformity is necessary. Customs as to choice of author heading, proper references, etc., must be adhered to more rigidly, and the system of classification of new titles must coincide with the old, so that all material on a given topic shall be grouped in one place. It would not, indeed, be difficult for a specialist staying permanently in the Library to learn the rules of entry. Variations in methods of

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preparing the title after the heading has been decided upon would make less trouble, though even here a certain degree of uniformity is desirable. As regards the subject catalogue, a specialist might work with a great degree of independence, but not unless a thorough revision of the old titles goes hand in hand with the classification of the new. In other words, the specialist should work out and carry into execution a system of classification for both old and new books, just as has been done in the shelf arrangement. At the present time, there could hardly be a better piece of work undertaken than a working over of the titles in European history, — e. g., a consolidation of cards now under History, Politics, Legislation, a substitution of an arrangement into periods for the present chronological series of the cards under various countries in the heading History, with other changes that might seem advisable. It would seem best for the work of preparing catalogue cards for new books to remain at present in the hands of the regular cataloguers, though Dr. Lichtenstein's special knowledge should be constantly made use of and he might well give the titles a hasty final revision."

Mr. Tillinghast reports as follows as the result of his experience with this method of work: —

"After trying for some time the plan of cataloguing and 'setting up' certain groups, I find that this method is much more interesting than the old, and gives a much better knowledge of the whole field of the subjects. Acquaintance with the catalogue helps in shelf-listing, and acquaintance with the books on the shelves and their arrangement helps in subject classification for the catalogue, and often in cataloguing. On the other hand, there is a danger of superficial and hasty judgments which the greater experience gained through work confined to cataloguing or shelf-listing is a guard against. Just how much time is saved, I cannot estimate. I fear it is not so much as might be expected. I fear that I sometimes hesitate on questions of entering or cataloguing which would be perfectly plain to those who have had long experience in those branches of work.

"I believe that all titles should be inspected by the head of the Catalogue Department."

It is only natural that effective coöperation should be more difficult to obtain in the case of the catalogue than in any other department of library work, since the catalogue, especially the author catalogue, has to be considered as a unit, and variations of practice are confusing and may be misleading. I believe, however, that, with longer experience, the specialist who is well acquainted with his subject,

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and is willing to take pains to familiarize himself with the details of the catalogue, may give most valuable assistance in preparing books for cataloguing by indicating briefly the work to be done. The actual writing out of cards, or of copying for the printer, may well be left to another hand. I expect to be able, in the course of the year, to extend this method of work one step further, by allowing one other member of the staff to carry books forward from the process of shelf-listing through the process of cataloguing.

WILLIAM COOLIDGE LANE,
*Librarian.*

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# THE GRAY HERBARIUM.

To the President of the University: —

Sir, — During the past academic year the regular staff of the Gray Herbarium has consisted of a curator (professor), an assistant professor engaged in monographic work, field exploration, and instruction, a collector, a librarian, an assistant engaged chiefly in determinative work, a library assistant, and an assistant engaged in the preparation and mounting of the specimens. Furthermore, the expert services of the following persons have been employed during portions of the year in connection with the activities of the Herbarium: President E. Brainerd of Middlebury College (on the genus *Viola*), Professor A. S. Hitchcock of the United States Department of Agriculture (on the *Gramineae*), Mr. Oakes Ames (whose valued services on the *Orchidaceae* have been gratuitously rendered), Mr. A. A. Eaton of the Ames Botanical Laboratory (on the genera *Equisetum* and *Isoëtes*), Mr. W. W. Eggleston (on the genus *Crataegus*), and Mr. F. Schuyler Mathews (as artist).

Among the sets of plants received during the year the following have from their extent or rarity been noteworthy: — By gift or exchange: from Mr. J. H. Maiden, Government Botanist of New South Wales, 200 plants of Australia; from Messrs. J. E. Thayer and Outram Bangs, 138 plants of Guadalupe Island (off the coast of Lower California), a locality of exceptional conditions and peculiarly interesting vegetation; from Dr. C. O. Rosendahl, of the University of Minnesota, 366 plants of Minnesota; from Professor E. O. Wooton, 526 plants of New Mexico, collected by Mr. O. B. Metcalfe; from Mr. T. S. Brandegee, of the University of California, 310 plants of Mexico; through Professor W. G. Farlow, 107 pteridophytes from the herbarium of the late Isaac Holden; from Professor J. W. Harshberger, of the University of Pennsylvania, 145 plants of Bermuda; from the Herbarium of Oxford University, 126 plants of Great Britain; from Mr. O. von Seemen of Berlin, specialist on the *Salicaceae*, a series of 218 specimens of the difficult genus *Salix*, including many critically studied hybrids; from Mr. C. Belhatte, of Paris, 115 plants of Europe; from the United States National Museum, through Dr. J. N. Rose, 958 plants of Mexico, including several collections of special value; from the New York Botanical Garden, through Professor N. L. Britton, 203 plants of the Philippine

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Islands, 44 plants of Barbados, 144 plants of Bermuda, and 42 plants of the Bahama Islands; from the New England Botanical Club, 636 plants from the herbarium of the late Charlotte N. S. Horner; and from Professor James Fowler, of Queen's University, 210 plants of Canada, chiefly from the region of the Lower St. Lawrence. By purchase: from Mr. H. von Türckheim, 102 plants of Guatemala; the Gramina Hungarica, fascicles 1–6, including 305 specimens of Hungarian grasses, prepared and identified with special care; through Professor C. S. Sargent, 383 herbaceous plants of Bolivia and Paraguay, collected by Mr. K. Fiebrig, and 2018 herbaceous plants of Paraguay, collected by Mr. E. Hassler; from Mr. F. Raine, 300 plants of southern France; from Mr. T. S. Brandegee, 500 plants of Vera Cruz, Mexico, collected by Mr. C. Purpus; from Mr. W. W. Eggleston, 102 specimens of the genus *Crataegus;* from Professor N. L. Britton, 637 duplicates from the herbarium of Père Duss, well representing the florulae of Guadeloupe (W. I.) and Martinique; from Sir William T. Thiselton-Dyer, 857 plants of Colombia from the herbarium of Lehmann; from Dr. Edward Palmer, 484 plants of northern Mexico; from Mr. A. A. Heller, 482 plants of California; from Mr. W. H. Blanchard, of Westminster, Vermont, 389 specimens of *Rubus*, a genus of which he has long made a special study; from Mr. C. H. Shaw, 513 plants of the Selkirks. Collected by the staff: by Mr. Pringle, 439 plants of Mexico; by Professor Fernald, 1459 plants of Gaspé Peninsula and 99 plants of Rhode Island and Connecticut.

The entire number of specimens received from all sources has been 16,656.

The number of mounted sheets added to the organized portion of the Herbarium has been 14,679.

Duplicates sent out in exchange this year have numbered 8,754.

In the last report mention was made of special progress in the development of the Herbarium Library rendered possible largely through a gift of $1,000 to secure some of the more important desiderata. During the past year an additional gift of $500 has been received from the same generous but anonymous donor for use in continuing these purchases, and again particular attention has been given toward the filling of lacunae in the library, among the works acquired the following being worthy of special mention: Dumont de Courset, Le botaniste cultivateur; Comolli, Flora Comense; Lindenia, Iconographie des Orchidées; and Jordan and Fourreau, Icones ad floram Europae, a three volume folio work with many finely colored illustrations.

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The Library has also received from Mr. Howard Payson Arnold three rare and valuable books: Cavannilles, Descripcion de las plantas; Roxburgh, Plants of the coast of Coromandel; and Richard, Tentamen florae abyssinicae.

The number of volumes received from all sources during the year has been 576 and of pamphlets 558.

Mr. Pringle, Collector for the Herbarium, has made another journey to Mexico and, notwithstanding exceptionally unfavorable conditions of prolonged drought prevailing in portions of the regions visited, was able to obtain a considerable number of new or otherwise noteworthy plants.

Professor Fernald has continued with marked success his investigation of soil control in the distribution of plants especially in the alpine regions of New England and the maritime provinces of Canada. His noteworthy results, already reduced to statistical form, show conclusively an intimate relation hitherto unsuspected between the distribution of plants in their native state and the occurrence of certain chemical elements in the underlying rock strata.

A request on the part of several students for guidance in research work in this highly interesting field of investigation has led to the announcement of Botany 20*d*, an additional research course, in charge of Professor Fernald. Instruction in this course as well as in Botany 7 and 20c will be conducted at the Herbarium.

Under the supervision of Mr. W. S. Burke, Inspector of Grounds and Buildings, a new boiler has been installed to replace the worn and antiquated one which for many years has been used to heat the Herbarium as well as the adjacent laboratory and lecture room.

Work on the Card Index of new Genera, Species, and Varieties of American Plants has been continued with vigor during the year by Miss M. A. Day, Librarian of the Herbarium, with the assistance of Miss H. E. Day and Miss E. M. Vincent, 8,931 cards having been issued to subscribers. This work has been conducted with such care and economy of methods that the money returns have considerably more than repaid the outlay in printing and have even covered the clerical activities involved. The scientific usefulness of this enterprise is widely recognized and the skill with which it has been managed becomes more apparent at a time when a parallel enterprise, covering the new plants of the Old World, has been discontinued owing to financial difficulties.

In April, 1907, through the liberality of Mr. N. T. Kidder, a botanical collector was sent with a geological exploring expedition to

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the Aleutian Islands, the condition being made by Mr. Kidder that the plants secured on the expedition should be sent to the Gray Herbarium. The collection thus received came to hand after the close of the academic year and comment upon it must be deferred.

Again it is my privilege to report a high degree of efficiency and devotion on the part of the Visiting Committee, through whose efforts the needs of the Herbarium have been brought to the attention of many patrons. The ready contributions of persons thus interested, supplemented by liberal gifts from members of the Committee, have enabled the Herbarium again to complete its financial year free from deficit. This is especially gratifying from the fact that it enables the Herbarium to approach a larger income in no way handicapped by debt.

In a former report mention was made of the liberal bequest of Mrs. W. B. Potter for the further endowment of the Herbarium. Mrs. Potter's estate has now been settled, her specific bequest having been paid in June, the residual portions of her legacy, together with accumulated interest, during the autumn. A part of the payment has been in transferred securities, the value of which is to some extent dependent upon a fluctuating market. It may be said, however, that the cash and securities thus transferred to the President and Fellows have been estimated at $195,798.02. According to the provisions of the will the property thus received will be known as the Sarah E. Potter Endowment Fund and its income devoted to the support of the Gray Herbarium.

It would be impossible to overstate the significance of this gift to the Herbarium or adequately express the gratitude of the staff and friends of the establishment. At the time of Dr. Gray's death in 1888 the Gray Herbarium had already reached, through his untiring efforts and high professional distinction, a degree of scientific importance, which made it imperative that the development and services of the establishment should be maintained in a manner which its small endowment of $18,500 could of itself in no wise render possible. Thus for nearly twenty years the Herbarium has been in great part dependent upon gifts for present use. These have been received, largely through the activity of the Visiting Committee, with gratifying regularity and in amount sufficient to maintain the continuous growth of the collections and library as well as to render possible the determinative work, monographic researches, and publications of the staff.

Vigorous and unremitted effort has also been made by friends to secure for the Herbarium an adequate endowment. This aid, in

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which Mrs. Potter took no small part, culminated in securing the Asa Gray Professorship Fund, the Asa Gray Memorial Fund, and the Robert Charles Billings Fund. These funds, together with the much larger Sarah E. Potter Fund just received, will yield an income which (supplemented by other sources of revenue such as copyrights, sale of publications, etc.) will maintain the Herbarium at its present grade of expenditure and permit a moderate enlargement of the activities of the establishment. It is to be pointed out, however, that the added income from increased investments does not so greatly exceed the resources heretofore available through generous gifts for present use as to permit any sudden change of policy, augmentation of the staff, or other considerable increase of expenditure. The beneficial effect is rather in giving the Herbarium what is of even higher importance, namely, an *assured* income, since most scientific enterprises, such as explorations, monographic publications, revision of text-books, and the like, have to be planned far in advance, and can scarcely be undertaken unless the available resources can be calculated some years ahead.

Although the additional endowment will relieve the Herbarium from its most pressing needs, it is hoped that such contributions as have been made with some regularity for present use during the last few years may, so far as possible, be continued, for upon such gifts must depend, to a great extent, any possibility of special acquisitions for the collections and library. It is believed that the incentive to such gifts will not be less from the circumstance that in future they may not be so pressingly needed for the running expenses of the establishment but may be, in each instance, employed specifically to increase in some particular regard the acquisitions of the Herbarium or to augment the scientific undertakings and published output of the staff, — to accomplish, in other words, ends which would but for them have been unattainable. In this connection it should be borne in mind that the Gray Herbarium belongs to a class of establishments elsewhere largely supported by governmental or municipal aid and therefore able to maintain a larger staff and incur much greater expenditure. For this reason, if the Gray Herbarium is to maintain its high rank among allied establishments, it must be supported by a gradually increasing income.

The particular need of the Herbarium at present, a new building, has been duly emphasized in former reports. Here it may be said merely that such need, after another year's growth, is even more pressing. It is hoped, also, that the substantial addition to the endowment of the Herbarium, by putting the establishment upon a

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footing of permanence, may be a new incentive to gifts for the much needed building.

During the year the staff of the Herbarium has published 27 scientific papers, which have been so completely recorded in the Harvard University Gazette as to need no further mention here.

B. L. ROBINSON, *Curator.*

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# THE BOTANIC GARDEN.

To the President of the University: —

Sir, — I have the honor of presenting, as Director of the Botanic Garden, the following report for the year 1906–07.

As matter of record, Mr. Robert Cameron, Head Gardener, has prepared a short account of the weather at the Garden during the year which has just closed: —

"The weather in winter was very cold, registering frequently from six to ten degrees below Fahrenheit's zero. This severe cold demanded a great increase in the amount of coal required to keep the temperature of our greenhouses within safe limits. Fortunately the ground was well covered with a thick coating of snow, and hence our herbaceous plants in the open plots wintered well. The spring was cold and late, but the spring-flowering plants blossomed unusually well, and their flowers lasted for a long time, owing to the cool moist weather. The summer was hot and remarkably dry, and for several weeks we had no rain, but our improved water-supply enabled us to keep the plants in good condition. An unusual amount of the time was spent in the winter in 'creosoting' and destroying the eggs of the gypsy moth and the nests of the brown-tail moths. The lateness of the spring prevented our spraying with disparene until nearly the end of May. This spraying consumes much time and involves large expense, but it is the only effective measure known to us by which we can destroy injurious leaf-eating insects. By thorough spraying we were able to meet successfully even the elm-leaf beetle, although the leaves of elm trees near the Garden were completely destroyed."

In pursuance of the policy of making the Garden attractive to all students of the University many new species and varieties of bulbous plants have been added to our collection, and it is expected that these will prove to be of much interest in the coming spring. Mr. Cameron, who is on duty at the Garden all the time, reports that the numbers of visitors are increasing year by year, but that it is in spring and early summer that the largest numbers come. At that time the Garden serves as a park for our students and for the general public, and in this way gives great pleasure to our community. Our earnest attempts to render the Garden attractive to all of our students and to the community in general do not interfere

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at all with its chief office as a source of supply of material for our botanical classes.

The Director must again call attention to the serious difficulty under which a northern garden labors in its attempt to meet the reasonable demands of University students. Our first term begins at about the time when the first frosts come in October, and our final class exercises are held in the last days of May when the out-of-door plants are just coming into bloom. In other words, one is obliged to provide material for class studies during the long cold season when but little open-air material is available. Forcing plants to bloom out of season is always an expensive matter, but under our present conditions we are obliged to collect a large number of wild plants in the autumn for early blooming under glass. Otherwise it would not be possible for us to bring any of the students in our very large elementary class into contact with our native flora. After the regular College course ends our Garden is in full bloom. In what way can we best use this great amount of summer material?

The summer courses in Botany are attended by comparatively few students; much larger classes could be supplied than now. Possibly by reconstructing the botanical courses in the summer their range could be safely extended and a wider choice offered to those College students who might wish to avail themselves of increased opportunities to employ wisely a part of a too long vacation.

During the past summer, the Botanic Garden placed at the service of those conducting the Nature Study course all material asked for. Every endeavor to utilize our abundant store of flowers for study in the summer will meet with the cordial coöperation of all members of the staff at our Botanic Garden.

Important additions have been made to all parts of the Botanical Museum during the past year. A large proportion of the specimens of economic products which had been injuriously affected by light have been replaced by fresh specimens, and this work of replacement is to be continued as occasion demands. In the great Botanical Museum in Calcutta the economic products are replaced nearly every year by fresh ones for exhibition and study, but our cases do not suffer so severely as the museums in the tropics from intense light or from so many museum pests. Practically all of our type-specimens are now in insect-proof containers. The economic product which attracted most attention this year is the striking exhibit of sugar-cane from our experimental station in Cuba. The specimens exhibited were the finest of several hundred varieties of

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artificial seedlings. The best is known as "Harvard 208." It has proved to be strong, resistant, and of high sugar content.

The Ware Collection of Glass-models of Plants in Flower has now been arranged in three rooms in such manner as to exhibit the different relations of plants. In the vestibule the specimens are distributed with reference to their surroundings, — soil, water, light, and the animal friends and foes. In the large room adjoining they have been placed in a linear series extending from Engler's highest class to the lowest of the flowering plants, showing by means of sections and enlarged parts the characteristics upon which systematists base their modern classification. A communicating room contains the principal economic plants, together with their products. This improvement in classification and the new mounting on plaster-plaques have drawn to the exhibition rooms even larger numbers of visitors than before, and on certain days it has become a matter of embarrassment to afford all the visitors an opportunity of examining the models. Our cases are too close together for the greatest convenience of visitors, but no change in this respect is at present possible. To remove the specimens to a special building, as has been contemplated, would seriously interfere with the original plan of Professor Louis Agassiz, namely, to bring under one roof specimens illustrating every branch of Natural History. He designed having plants as well as minerals and animals displayed in his Museum, and these glass models of plants carry out our part of that plan. To remove them now would cause a break in the continuity which cannot be regarded with favor.

In the section devoted to Fossil Plants little has been done during the year except to maintain the collection in good condition. Professor R. T. Jackson reports that one hundred and ninety good specimens of choice selected plants from the Cretaceous of Kansas have been purchased, comprising one hundred and five species and varieties. Dr. Jackson has given to this part of our Museum a great deal of time, and has rendered all parts of the great collection easily accessible.

The experiment station in Cuba is now succeeding beyond our expectations. The cane-seedlings are proving good in every way, and the last are the best. The generous manner in which Mr. Atkins has sustained the enterprise has enabled the management to undertake difficult experiments the results of which at one time seemed doubtful. But it is pleasant to report that Mr. Atkins expresses himself as completely satisfied with the undertaking. Our range of tropical and subtropical species in the grounds is being

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constantly widened. Very cordial relations are sustained with the British stations in the West Indies and with the government station at Santiago de las Vegas. This coming winter renewed attempts will be made to bring in the new Caoutchouc plants, and also to begin a study of certain new varieties of Cacao.

On account of the limited amount of space available in our greenhouses we were obliged in the spring to decline the generous offer, from a friend of the Garden, of a large collection of valuable orchids. If we had had at our disposal two hundred square feet more on our shelves we should have gladly accepted the gift. But this space could not be had without the erection of another greenhouse, and this, considering our scanty funds, was out of the question.

During the past year the Overseers' Committee on the Garden and Museum have again considered the advisability of attempting to increase our slender endowment fund. The financial condition of the country forbids us to press the matter at this time.

GEORGE LINCOLN GOODALE, *Director*.

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# THE ARNOLD ARBORETUM.

To the President of the University: —

Sir, — I have the honor to submit the following report on the progress and condition of the Arnold Arboretum during the year ending July 31, 1907.

The preparation of the ground (see report for 1905–06) for the type collection of hardy shrubs has been finished during the year and the collection has been planted as far as material for it has been available. In the new arrangement this collection occupies nineteen beds 10 feet wide, with a total length of 7765 feet, separated by grass paths 5 feet wide. The northern and eastern ends of the area filled by these beds are protected by a trellis 1280 feet long and 10 feet high, built with concrete posts and galvanized wire stringers and to be used for the cultivation of the collection of vines and other climbing plants. The ground available for the shrub collection is unfortunately too small for the display of representatives of all the hardiest and most distinct species, and it has been found necessary to plant genera like Syringa, Viburnum, Cornus, and several others in which some species are arborescent along the drives in different parts of the Arboretum. Among these excluded groups are some of the principal hardy genera of the Heath family, including Rhododendrons, Azaleas, and Kalmias; and for these genera additional ground has been prepared on the western slope of Bussey Hill, and at the base of Hemlock Hill where a large plantation of Rhododendrons has been made during the year. Ground has also been prepared round the borders of the North Meadow for a number of partly arborescent, partly shrubby, groups which were formerly cultivated in the general shrub collection.

On Peter's Hill 266 additional species or forms of North American Crataegus have been permanently planted during the year. This collection is now represented by 716 groups of species, forms, and varieties.

The interchange of plants and seeds with other horticultural and botanical establishments has been continued during the year. 14,003 plants (including grafts and cuttings) and 732 packets of seeds have been distributed as follows: To the United States, 12,522 plants and 57 packets of seeds; to Canada, 21 packets of seeds; to the West

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Indies, 8 packets of seeds; to Argentina, 5 packets of seeds; to Peru, 4 packets of seeds; to Chili, 101 packets of seeds; to Great Britain, 1,186 plants and 147 packets of seeds; to the continent of Europe, 295 plants and 272 packets of seeds; to Japan, 69 packets of seeds; to China, 3 packets of seeds; to Java and the Straits Settlements, 3 packets of seeds; to Australia, 4 packets of seeds; to New Zealand, 6 packets of seeds; to the Hawaiian Islands, 13 packets of seeds; to Cape Colony, 17 packets of seeds. There have been received during the year 3,325 plants and 476 packets of seeds; of these, 3,067 plants came from the United States, 75 from England, 31 from France, 2 from Holland, and 150 from Russia.

During the year 7,823 sheets of dried plants have been added to the herbarium; of these, 6,392 have been purchased and 1,433 have been presented to the arboretum. The most important of the purchased collections is a selection of 3,540 sheets from the herbarium made by Mr. Alfred Rehder during his travels in Europe and North America and rich in rare and critical woody species cultivated in European botanic gardens. Other important collections added to the herbarium during the year are from the United States, Mexico, Jamaica, Chili, Paraguay, the Philippine Islands, the Malay Peninsula, Sweden, northern Russia, the Caucasus, and Portugal.

During the year the Arboretum has received by gift 1,508 bound volumes and 247 pamphlets.

To supplement a gift of $5,000 made a few years ago by the late Francis Skinner, for the purchase of rare and expensive books for the library, his son, Mr. Francis Skinner, of Dedham, has given to the Arboretum a similar sum, with the suggestion that the books purchased with this money be considered a memorial to his father's interest in the Arboretum and its work.

During the year instruction in dendrology has been given at the Arboretum, by Mr. Jack, to students of landscape-gardening from the Institute of Technology and to University students in forestry.

A few friends of the Arboretum living in Massachusetts and in Europe have made it possible to begin during the year the systematic study of the trees and shrubs of central and western China. This mountain region, with a climate similar to but more severe than that of the southern Appalachian region of North America, is known to be rich in valuable and interesting plants; and as it is the only part of the world remaining botanically unexplored of which the trees may be expected to flourish in our northern states, results of the highest scientific and practical value may be expected from its careful examination and by the introduction of its plants into American and

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European gardens and plantations. For this difficult exploration the Arboretum has secured for two years and a half the services of Mr. E. H. Wilson, an Englishman who has had five years' experience in western China in collecting plants for an English commercial firm. Mr. Wilson, having passed some time at the Arboretum during the autumn, sailed for China early in January and established his permanent base of operations at Ichang at the foot of the great gorge of the Yang-tse-kiang. During 1907 he has been occupied in collecting on the high mountains of Hupeh, and early in 1908 is to proceed by way of the Yang-tse-kiang to the western borders of Szech'uan to explore the great forests of conifers which cover the mountain ranges separating China from Thibet.

To extend the field of operations in China an arrangement has been made with the Department of Agriculture of the United States under which an experienced collector of the Department in China has been detailed to explore, without expense to the Arboretum and under Mr. Wilson's general direction, the forests surrounding the temples on the little known Mt. Wut'ai, one of the sacred mountains of China, situated in the northern province of Shansi.

The seeds of a large number of plants entirely new to cultivation have already been received from Mr. Wilson, and there is now every reason to hope that his mission will be successful, and that this new enterprise will be one of the most useful and interesting pieces of work undertaken at the Arboretum.

Mr. Alfred Rehder returned to the Arboretum from Europe in November and has since been engaged here on the Bradley Bibliography. Mr. Shaw is still working on his monograph of the genus Pinus.

I take this opportunity to express again my thanks to the Trustees of the Massachusetts Society for the Promotion of Agriculture for their annual grant for the maintenance of the Arboretum, and to the members of the Visiting Committee for their interest and assistance.

C. S. SARGENT, *Director.*

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## THE CHEMICAL LABORATORY.

To the President of the University: —

Sir, — Professor Richards, although on leave of absence for the year, continued to give during the first half-year his lectures on physical chemistry (Chemistry 6). In March he went to Germany and served as exchange professor at the University of Berlin during the summer semester, lecturing on the exact determination of physico-chemical constants and conducting a number of investigations in the laboratory of the First Chemical Institute of the University. During Professor Richards' absence Chemistry 6 was conducted by Mr. H. L. Frevert (A.B. 1905) and Chemistry 8 (Historical Development of Chemical Theory) by Professors Torrey and Baxter. Mr. Frevert also gave the half-course in electro-chemistry (Chemistry 7), while the laboratory course in this subject (Chemistry 13) was omitted. No changes were made in the other regular courses offered by the Division during the year 1905–06.

The number of elections in the several laboratory courses during the year and in June, 1906, were as follows: —

| | October, 1906. | January 1, 1907. | June 1, 1907. | June 1, 1906. | |
|---|---|---|---|---|---|
| Chemistry 1 . . . . | 318 | 330 | 300 | 309 | |
| Chemistry 3 . . . . | 114 | 115 | 110 | 100 | |
| Chemistry 4 . . . . | 37 | 43 | 39 | 29 | |
| Chemistry 5*a* . . . | 34 | 38 | 32 | 37 | |
| Chemistry 6 . . . . | 14 | 15 | 18 | 25 | |
| Chemistry 9 . . . . | 16 | 16 | .. | .. | (14, Jan. 1, '06) |
| Chemistry 10 . . . . | .. | .. | 19 | 17 | |
| Chemistry 12 . . . . | 8 | 10 | .. | .. | (8, Jan. 1, '06) |
| Chemistry 13 . . . . | .. | .. | x[1] | 5 | |
| Chemistry 20*a* . . . | x | x | x | 2 | |
| Chemistry 20*b* . . . | 5 | 5 | 5 | 2 | |
| Chemistry 20*c* . . . | 6 | 6 | 6 | 8 | |
| Chemistry 20*d* . . . | x | x | x | 6 | |
| Chemistry 20*e* . . . | 1 | 2 | 1 | 1 | |
| Chemistry 20*f* . . . | 13 | 14 | 15 | 5 | |
| | 566 | 594 | 540 | 546 | (+22=568) |

[1] x signifies that the course was not given.

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The number of elections in the courses in which no laboratory work is given were as follows:—

| | October, 1906. | Jan. 1, 1907. | June 1, 1907. | June 1, 1906. | |
|---|---|---|---|---|---|
| Chemistry 1 (for the lectures only) | 2 | 5 | 2 | xx[1] | |
| Chemistry 6 (for the lectures only) | 1 | 2 | 2 | xx | |
| Chemistry 12 (for the lectures only) | 0 | 1 | .. | .. | |
| Chemistry 2 . . . . . | 102 | 102 | .. | .. | (95, Jan. 1, '06) |
| Chemistry 5 . . . . . | 34 | 39 | 34 | 39 | |
| Chemistry 7 . . . . . | .. | .. | 9 | 19 | |
| Chemistry 8 . . . . . | .. | .. | 60 | 73 | |
| Chemistry 11 . . . . . | 23 | 26 | 24 | 28 | |
| Chemistry 14*a* . . . . . | .. | .. | x | 21 | |
| Chemistry 15 . . . . . | .. | .. | 42 | 20 | |
| Chemistry 16 . . . . . | 10 | 11 | .. | .. | (10, Jan. 1, '06) |
| Chemistry 17 . . . . . | x | x | .. | .. | (17, Jan. 1, '06) |
| Chemistry 18 . . . . . | x | x | .. | .. | ( 9, Jan. 1, '06) |
| | 172 | 186 | 173 | 199 | (+131=330) |
| Total number of elections . . . | 738 | 780 | 713 | 745 | (+153=898) |

The number of elections in laboratory courses during 1906–07 was 566, as against 568 in 1905–06, while the entire number was 853 in the last year and 898 in the year before. By deducting from the last figure the number of elections in courses 14*a*, 17, 18 (given during 1905–06 only) we obtain 851 for the total number of elections in 1905–06, which is more fairly comparable with former years.

The tabulation of the number of students completing laboratory and lecture courses is more accurate than the tabulations made at the beginning of the year or during the year. The table on the following page gives a comparison of the elections for the past twelve years. The figures for the elections are taken from the annual reports of the Dean of the Faculty of Arts and Sciences; for the total attendance, from the Annual Catalogues.

The percentage of laboratory elections out of the entire number of students in the Faculty of Arts and Sciences during the three years, 1902–05, was not more than the average percentage for the twelve years, and the percentage in 1905–06, though less than the average, was still greater than in 1903–04, in which year was the maximum number of students in the Faculty of Arts and Sciences.

While the number of laboratory elections in 1906–07 was 8 per cent. greater than in 1895–96, the percentage of elections was less, the number of courses having increased from 12 to 15. The lower percentage of laboratory elections may be ascribed to the diminution in the number of students taking prescribed programmes in the

[1] xx signifies that this computation was not made prior to 1906–07.

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Lawrence Scientific School; perhaps also to the additional charges for extra courses.

| | 1895–96. | 1896–97. | 1897–98. | 1898–99. | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | Aver. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number in laboratory courses. | 521 | 512 | 555 | 510 | 572 | 624 | 634 | 601 | 604 | 602 | 566 | 565 | 572 |
| Number in all courses. | 544 | 607 | 663 | 640 | 711 | 732 | 752 | 750 | 738 | 873 | (896) 849 | 850 | 726 |
| Attendance, Faculty Arts and Sciences | 2396 | 2417 | 2516 | 2588 | 2723 | 2840 | 2844 | 3009 | 3023 | 2905 | 2797 | 2867 | 2744 |
| Percent. completing laboratory courses. | 21.7 | 21.2 | 22.1 | 19.7 | 21.0 | 22.0 | 22.3 | 20.0 | 20.0 | 20.7 | 20.2 | 19.7 | 20.9 |
| Percent. completing all courses. | 22.7 | 25.1 | 26.4 | 24.7 | 26.1 | 25.8 | 26.4 | 24.9 | 24.4 | 30.1 | 30.4 | 29.6 | 26.4 |
| No. of Courses given: Laboratory. | 12 | 12 | 12 | 12 | 13 | 13 | 13 | 14 | 15 | 15 | 15 | 15 | 13 |
| All. | 13 | 14 | 14 | 14 | 16 | 16 | 16 | 19 | 20 | 21 | 22 (25) | 23 | 17 |
| Elections per course: Laboratory. | 43 | 43 | 46 | 43 | 44 | 48 | 49 | 43 | 40 | 40 | 38 | 38 | 43 |
| All. | 42 | 43 | 47 | 46 | 44 | 46 | 47 | 39 | 37 | 42 | 36 | 37 | 42 |

The number of lecture courses has increased from 1 in 1895–96 to 8 in 1906–07, and the percentage of all elections from 22.7 to 29.6. For some of these courses laboratory work would be provided if there was room available. From this and other evidence it is safe to say that the laboratory elections would show an increase if the laboratory accommodations were greater.

Chemistry *B* was discontinued in 1902–03, but the decrease in the number of laboratory elections for that year and ensuing years was not, on the whole, more than the average number in Chemistry *B* during the previous seven years.

The number of elections per course is smaller than in 1895–96, but the average has been practically the same for laboratory and for all courses. The variations from this average have not exceeded 16 per cent. and have been generally under 8 per cent.

The number of research courses has increased from 4 in 1895–96 to 6 in 1906–07, and the elections from 12 to 27. The laboratory accommodations for research students are now taxed to the limit.

No alterations affecting the working space in either Boylston or Dane Hall were made during the year. Attention has been called repeatedly in previous reports of the Directors to the crowded state of Boylston Hall and the unsanitary condition of some of the rooms

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in this building and in Dane Hall. While the alterations of previous years have improved some of the rooms, yet a majority of the students are hearing lectures and doing laboratory work in unsuitable quarters. No provision for much needed laboratory courses can be made on account of lack of space. Sufficient room for research students is more difficult to find each year, and the facilities for research, long inadequate, cannot be improved in the present building.

We continue to receive books and journals from Professor Wolcott Gibbs, and our collection of material for lectures in industrial chemistry has been increased by generous gifts from various manufacturers.

The following investigations were carried on by the staff of the Division during the year: —

Professor Jackson, with Dr. Latham Clarke, continued the study of curcumine and rosocyanine. With Mr. P. W. Carleton the study of derivatives of tetrachlororthoquinone was continued, including the quinhydrone and the heptachlorpyrocatechinhemiether. With Mr. H. A. Flint, work on the tetrabromorthoquinone was carried on, the first replacement of bromine by the methoxy group in these compounds being observed, and good progress made in determining the constitution of the oxidation product containing five atoms of carbon. Mr. R. W. Peakes prepared the mercuric salts of the three nitranilines. With Mr. J. E. Zanetti a new form of extractor was tested, and shown to be much more effective than that now in use. Much time was also spent in studying the action of bromine on dimethylaniline and in trying to make orthoquinones containing the nitro group.

Professor Richards began in April at Berlin the investigation of the composition of the chlorates, with the assistance of Dr. A. Staehler of Berlin and Dr. F. Kuzma of Prague. He began also the precise quantitative study of the composition of the halide salts of ammonium in order to obtain more definite knowledge concerning the atomic weight of nitrogen. In this work part was taken by Dr. P. Köthner, privatdozent in the University of Berlin; Dr. W. F. Hinrichsen of the Königliche Materialprüfungsamt; Dr. E. Groschuff and Dr. K. Hüttner, chemists of the Physikalisch-technische Reichsanstalt; Mr. E. Tiede and Mr. H. Kessler. Dr. F. Hoffmann, also of the last named institution, studied the transition temperature of sodic sulphate and strontic chloride with the intention of using these points in standard thermometry. Dr. F. Wrede carried on a similar investigation upon manganous chloride. The transition temperature of this salt was found to be 59.089° on the international hydrogen scale, and was shown to be capable of easy and exact reproduction.

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Convenient apparatus was devised for carrying out the determination. A description of this latter investigation is in press, and the others will be continued in Berlin during the coming winter and, it is hoped, shortly finished. The expenses of all these investigations were met through the generosity of Geheimrat Emil Fischer and the German Government. Professor Richards has received a fifth grant of $2500 for research from the Carnegie Institution of Washington.

Professor Torrey continued with Mr. H. B. Kipper the study of ketone substitution derivatives of orthohydroxyketones, the special object being to extend the knowledge of alkali-insoluble phenols. With Mr. W. H. Hunter two isomeric silver salts of tribromphenol were discovered and investigated. With Mr. W. MacPherson some new azo dyes from paraamidoacetophenone were prepared and investigated, and with Mr. F. N. Patterson a similar series from paraamidobenzophenone. With Mr. C. M. Brewster the action of phthalic anhydride on resacetophenone and the reduction of the latter compound were studied. With Mr. W. A. Boughton a study was made of the velocities of saponification of certain esters derived from substituted phenols.

The following researches were carried on under the direction of Professor Baxter: Mr. F. B. Coffin commenced an investigation upon the atomic weight of arsenic by analysis of silver arsenate, while Mr. Grinnell Jones conducted a parallel research upon the atomic weight of phosphorus by analysis of silver phosphate. Mr. Edward Mueller continued the investigation upon the atomic weight of chromium, begun last year by Dr. M. A. Hines, through the analysis of silver chromate. The molecular weight of silver chromate, referred to silver as 107.93 and oxygen as 16.000, was found to be 331.92, whence the atomic weight of chromium is 52.06. If silver is taken as 107.88, chromium becomes 52.01. Mr. G. S. Tilley continued the analysis of iodine pentoxide, begun last year in order to refer the atomic weight of iodine directly to oxygen. Although final results have not yet been obtained, positive evidence has been secured that the ordinarily accepted value for iodine is considerably too high. Mr. H. H. Willard studied silver permanganate with reference to its use in determining the atomic weight of manganese. Mr. J. H. Wilson analyzed lead chloride and found the atomic weight of lead to be 207.19 if the atomic weight of silver is 107.93, and 207.09 if silver is 107.88. Mr. A. C. Boylston determined the specific and molecular refraction of the chlorides, bromides, and iodides of the alkalies in solution, while Mr. P. B. Goode studied the chlorides of the alkaline earths in the same way. Mr. H. W. Daudt investigated

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the carrying down of the oxalates of the alkalies and ammonium by oxalates of the rare earths, while Mr. R. H. Jesse, Jr., studied the oxalates of calcium, barium, nickel, and cadmium with reference to occlusion of oxalic acid and ammonium oxalate. Mr. F. N. Brink determined the specific gravities of the iodides of the alkalies and the alkaline earths. Mr. L. L. Burgess determined the refractive index of water at different temperatures, and examined the spectrum of the purest cadmium under different conditions. Mr. G. L. Kelley investigated the adsorption of silver nitrate by barium sulphate from solutions of various concentrations. Mr. H. C. Chapin studied the separation of the rare earths by fractional crystallization, with especial reference to the preparation of pure neodymium salts. Mr. L. G. Smith devised apparatus for measuring photographically optical activity for ultra violet light. Mr. H. H. Bartlett analyzed the ashes of certain plants. Professor Baxter received a fourth grant, of $1000, from the Carnegie Institution of Washington.

Dr. Henderson completed a research upon the relationship between position isomerism and heats of combustion in connection with the investigations of heats of combustion now being carried on in this laboratory. All his experimental investigations in biological chemistry have been pursued at the Medical School, there being no suitable space for the purpose in this laboratory.

Dr. Clarke, beside his work with Professor Jackson on the constitution of curcumine and rosocyanine, accomplished the synthesis of four new octanes. With Mr. P. R. Manahan he studied the preparation of certain other octanes, and attempted to apply the Grignard reaction to certain anthracene derivatives.

Professor Sanger studied with Mr. L. H. Whitney the preparation and properties of chlorsulphonic acid and pyrosulphuryl chloride, with especial reference to their separation from each other.

The following papers were published during the year: —

1. On the Action of Bromine on Dimethylaniline. Second Paper. By C. LORING JACKSON and LATHAM CLARKE. *Am. Chem. Journ.*, XXXVI, 409.

2. 1-3-5-triiod-2-chlorbenzene. By W. V. GREEN. *Am. Chem. Journ.*, XXXVI, 600.

3. On Certain Derivatives of Tetrachlororthobenzoquinone. By C. LORING JACKSON and R. D. MACLAURIN. *Am. Chem. Journ.*, XXXVII, 7.

4. On the Constitution of the $\alpha$ and $\beta$ Addition Compounds of Alcohols and Tetrabromorthobenzoquinone. By C. LORING JACKSON and R. D. MACLAURIN. *Am. Chem. Journ.*, XXXVII, 87.

5. Some Derivatives of Tetrachlororthobenzoquinone. By C. LORING JACKSON and R. D. MACLAURIN. *Am. Chem. Journ.*, XXXVIII, 127.

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6. The Determination of Small Amounts of Antimony by the Berzelius-Marsh Process. By CHARLES R. SANGER and J. A. GIBSON. *Proc. Am. Acad.*, XLII, 719; *Journ. Soc. Chem. Ind.*, XXVI, 585; *Zeitschr. f. anorg. Chem.*, LV, 205.

7. Equipment for Teaching Chemistry in Boston High Schools. By CHARLES R. SANGER. *Ann. Rep. Schoolhouse Dep't of Boston*, Feb., 1906–Feb., 1907.

8. Energy Changes involved in the dilution of Zinc and Cadmium Amalgams. By T. W. RICHARDS and G. S. FORBES. *Publ. Carnegie Inst. of Wash.*, No. 56, p. 1; *Zeitschr. f. phys. Chem.*, LVIII, 683.

9. The Electromotive Force of Iron under Varying Conditions, and the Effect of Occluded Hydrogen. By T. W. RICHARDS and G. E. BEHR, Jr. *Publ. Carnegie Inst. of Wash.*, No. 61, p. 1; *Zeitschr. f. phys. Chem.*, LVIII, 301.

10. Densities of Lithium, Sodium, Potassium, Rubidium, and Caesium. By T. W. RICHARDS and F. N. BRINK. *Journ. Am. Chem. Soc.*, XXIX, 117. 1907.

11. Concerning the Adiabatic Determination of the Heats of Combustion of Organic Substances, especially Sugar and Benzol. By T. W. RICHARDS, L. J. HENDERSON, and H. L. FREVERT. *Proc. Am. Acad.*, XLII, 573; *Zeitschr. phys. Chem.*, LIX, 532.

12. A Revision of the Atomic Weight of Potassium. The Analysis of Potassic Chloride. By T. W. RICHARDS and A. STAEHLER. *Publ. Carnegie Inst. of Wash.*, No. 69, p. 7; *Ber. d. deutsch. chem. Gesell.*, XXXIX, 3611; *Journ. Am. Chem. Soc.*, XXIX, 623.

13. A Revision of the Atomic Weight of Potassium. The Analysis of Potassic Bromide. By T. W. RICHARDS and E. MUELLER. *Publ. Carnegie Inst. of Wash.*, No. 69, p. 27; *Zeitschr. f. anorg. Chem.*, LIII, 423; *Journ. Am. Chem. Soc.*, XXIX, 639.

14. The Quantitative Synthesis of Argentic Nitrate and the Atomic Weights of Nitrogen and Silver. By T. W. RICHARDS and G. S. FORBES. *Publ. Carnegie Inst. of Wash.*, No. 69, p. 47; *Zeitschr. f. anorg. Chem.*, LV, 35; *Journ. Am. Chem. Soc.*, XXIX, 808.

15. The Molecular Weight of Argentic Sulphate and the Atomic Weight of Sulphur. By T. W. RICHARDS and G. JONES. *Publ. Carnegie Inst. of Wash.*, No. 69, p. 69; *Zeitschr. f. anorg. Chem.*, LV, 72; *Journ. Am. Chem. Soc.*, XXIX, 826.

16. The Compressibility of Lithium, Sodium, Potassium, Rubidium, and Caesium. By T. W. RICHARDS, W. N. STULL, and F. BONNET, Jr. *Publ. Carnegie Inst. of Wash.*, No. 76, p. 9.

17. The Compressibility of Carbon, Silicon, Phosphorus, Sulphur, and Selenium. By T. W. RICHARDS, W. N. STULL, and F. N. BRINK. *Publ. Carnegie Inst. of Wash.*, No. 76, p. 29.

18. The Linear Compressibility of Copper and Iron, and the Cubic Compressibility of Mercury. By T. W. RICHARDS and F. N. BRINK. *Publ. Carnegie Inst. of Wash.*, No. 76, p. 44.

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19. The Compressibilities of the More Important Solid Elements and their Periodic Relations. By T. W. RICHARDS and W. N. STULL. *Publ. Carnegie Inst. of Wash.*, No. 76, p. 56.

Nos. 16, 17, 18, and 19 are to appear likewise in the *Zeitschrift für physikalische Chemie* and the *Journal of the American Chemical Society*. A brief summary of the work on compressibility is given in the *Chemiker Zeitung*, 1907, No. 41; also in the *Zeitschrift für Electrochemie*, XIII, 519.

20. The New Outlook in Chemistry. Inaugural Lecture in Berlin, May 4, 1907. By T. W. RICHARDS. *Science*, XXVI, 297; *Harv. Grad. Mag.*, Sept., 1907; *Chem. Zeitung*, May 4, 1907.

21. Die neuere Entwicklung der Chemie in Amerika. By T. W. RICHARDS. *Internat. Wochenschrift*, I, 83.

22. The Carnegie Institution of Washington. By T. W. RICHARDS. *Internat. Wochenschrift*, I, 163.

23. Charles William Eliot. By T. W. RICHARDS. *Internat. Wochenschrift*, I, 392.

24. Neuere Untersuchungen über die Atomgewichte. By T. W. RICHARDS. *Ber. d. deutsch. chem. Gesell.*, XL, 2767.

25. Hydrazones of Aromatic Hydroxyketones. Alkali-insoluble Phenols. Preliminary Paper. By HENRY A. TORREY and H. B. KIPPER. *Journ. Am. Chem. Soc.*, XXIX, 79.

26. On Ethylpyromucylacetate. Preliminary Paper. By HENRY A. TORREY and J. E. ZANETTI. *Am. Chem. Journ.*, XXXI, 539.

27. The Solubility of Potassium Permanganate. By GREGORY P. BAXTER, A. C. BOYLSTON, and R. A. HUBBARD. *Journ. Am. Chem. Soc.*, XXVIII, 1336.

28. Note on the Insolubility of Ferric Hydroxide in Ammoniacal Solutions. By GREGORY P. BAXTER and R. A. HUBBARD. *Journ. Am. Chem. Soc.*, XXVIII, 1508.

29. A Revision of the Atomic Weight of Manganese. By GREGORY P. BAXTER and M. A. HINES. *Journ. Am. Chem. Soc.*, XXVIII, 1560; *Zeitschr. f. anorg. Chem.*, LI, 202.

30. A Revision of the Atomic Weight of Cobalt. By GREGORY P. BAXTER and F. B. COFFIN. *Journ. Am. Chem. Soc.*, XXVIII, 1580; *Zeitschr. f. anorg. Chem.*, LI, 171.

31. The Carrying Down of Ammonium Oxalate by Oxalates of the Rare Earths. By GREGORY P. BAXTER and R. C. GRIFFIN. *Journ. Am. Chem. Soc.*, XXVIII, 1684.

32. The Vapor Pressure of Iodine. By GREGORY P. BAXTER, C. H. HICKEY, and W. CHAPIN HOLMES. *Journ. Am. Chem. Soc.*, XXIX, 128.

33. Concerning Position Isomerism and Heats of Combustion. By LAWRENCE J. HENDERSON. *Proc. Am. Acad.*, XLII, 639; *Zeitschr. f. phys. Chem.*, LX, 413.

34. Ueber ein neues Octan. By LATHAM CLARKE. *Ber. d. deutsch. chem. Gesell.*, XL, 332.

CHARLES R. SANGER, *Director*.

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## THE JEFFERSON PHYSICAL LABORATORY.

To the President of the University: —

Sir, — The total number of students enrolled in the eighteen electives in Physics during 1906–07 was 409. The attendance on many of the higher electives was small; but one should reflect that the best trained men, who become professors, engineers, and heads of great enterprises, receive their education in small courses where there is a great opportunity for individual instruction.

Forty students attended the summer courses in the Laboratory.

Six graduate students were engaged in researches during the year.

The changes in equipment consisted in a much needed small lecture room, capable of seating ninety students, in which recitation and quizzes of sections can be held; and some necessary additions to the machine shop.

Professor G. W. Pierce has installed a wireless telegraph station, including a mast with antennae, which has been erected on the roof of the Laboratory. This new installation permits Professor Pierce to extend his investigations and those of his students.

The small library of the Laboratory is much consulted by graduate students, and their work would be greatly facilitated if this library could be increased and placed in charge of an attendant.

The Laboratory has met with two great losses: the appointment of Professor Sabine to the Deanship of the Scientific School prevents the constant and daily presence in the Laboratory of an inspiring teacher and investigator; and the illness of Professor Hall compelled a cessation for the year of his important work in heat, and removed an admirable lecturer.

The fourth volume containing the researches of professors, instructors, and graduate students, for the year 1906–07, is in press.

The researches of graduate students were as follows: —

Light through Thin Films. By W. B. Cartmel.

Effect of Ultra Violet Light on Ionisation. By F. Palmer.

Investigation in Heat. By L. L. Campbell.

Investigation of the Effects of High Pressures. By P. W. Bridgman.

Distribution of Magnetism on Long Cylinders. By C. L. B. Shudde-magen.

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Professor Kent of Boston University was given the facilities of the Laboratory for an investigation of the displacement of spectral lines.

The investigations of the professors, instructors, and assistants were as follows: —

Study of the so-called Canal Rays. By JOHN TROWBRIDGE. These rays are believed to open a new and important field for investigation of the nature of electricity.

Investigation in Magnetism. By B. O. PEIRCE. This is an exhaustive study of the time required to build up magnetism in circuits containing iron.

Investigation of the Thomson Effect. By EDWIN H. HALL. The conveyance of heat by electricity along conductors, the so-called Thomson Effect, has an important bearing on the subject of Thermo-electricity, and Professor Hall's investigation is the most exact that has appeared on this effect.

Architectural Acoustics. By WALLACE C. SABINE. Professor Sabine has been engaged in perfecting his means of investigation in this subject which he has made peculiarly his own.

Wireless Telegraphy. By G. W. PIERCE. Professor Pierce's apparatus for measuring the length of the waves employed in wireless telegraphy is coming widely into practical use; he has made a study of the singular property possessed by certain crystals in allowing an electric current to pass only in one direction, and has utilized this property in constructing a new receiver for wireless telegraphy.

Investigation of the Ultra Violet Rays. By THEODORE LYMAN. Dr. Lyman has discovered a marked absorption band in the region of these rays, which is due to oxygen; and this discovery appears to have an important bearing on the subject of Meteorology.

Investigations in Fluorescence. By HARRY W. MORSE. This work is a continuation of Dr. Morse's previous work on this subject, during which he discovered a line spectrum where previously only a band spectrum had been observed.

Longitudinal Vibrations. By HARVEY N. DAVIS. This investigation, besides adding to our knowledge of acoustics, has contributed a new mathematical method of analysis.

Measurement of the Internal Temperature Gradient in Common Materials. By SCHUYLER B. SERVISS. It has been claimed that the traces of radioactive substances in common materials is sufficient to produce a permanent difference of temperature along radii. This research is a careful measurement of this gradient. The results show that the gradient, if it exists at all, is extremely minute.

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The following papers have been published during the year: —

Expansion and Compressibility of Ether and Alcohol in the Neighborhood of their Cooling Points. By A. W. SMITH. *Proc. Am. Acad.*, Vol. 42, No. 47.

Experiments on Resonance in Wireless Telegraph Circuits. Part 5. By G. W. PIERCE. *Phys. Rev.*, Vol. 24, No. 2.

A Spectrum of the Röntgen Rays, and the Selective Absorption of these Rays in Different Metals. By J. M. ADAMS. *Am. Journ. of Science*, Vol. 23, February, 1907.

On the Thomson Effect and the Temperature Coefficient of Thermal Conductivity in Soft Iron between 115° and 204° C. By EDWIN H. HALL, L. L. CAMPBELL, S. B. SERVISS, and E. P. CHURCHILL. *Proc. Am. Acad.*, Vol. 42, No. 22.

The Transmission of Röntgen Rays through Metallic Sheets. By J. M. ADAMS. *Proc. Am. Acad.*, Vol. 42, No. 26.

Studies of Fluorite. IV. Kathode Luminescence of Fluorite. By HARRY W. MORSE. *Proc. Am. Acad.*, Vol. 42, No. 1.

Crystal Rectification for Electric Currents and Electric Oscillations. Part 1. Carborundum. By G. W. PIERCE. *Phys. Rev.*, Vol. 25, No. 1.

The Extra Transmission of Electric Waves. By W. B. CARTMEL. *Phys. Rev.*, Vol. 25, No. 1.

The Absorption of some Solids for Light of Extremely Short Wave Lengths. By THEODORE LYMAN. *Astrophys. Journ.*, Vol. 25, No. 1.

High Electromotive Force. By JOHN TROWBRIDGE. *Memoir Am. Acad.*, Vol. 13, No. 5.

JOHN TROWBRIDGE, *Director.*

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# THE DIVISION OF ENGINEERING.

To the President of the University: —

Sir, — I respectfully submit the following report on the work of the Division of Engineering for the year 1906–07.

The courses of instruction have remained substantially as in recent years, excepting certain small changes and additions to bring the instruction in Engineering into closer relation with the new School of Applied Science. The four courses in research were broadened and enlarged into courses in special fields, and five new offerings were added. The time required for each of them was extended to at least that of two full courses, with the possibility that a student might occupy in one such subject the entire study of one year. Those added were as follows: one course, Engineering 20*e*, on Structures of Wood, Steel, and Stone, intended to run parallel to the course in Re-inforced Concrete given during the previous year; one course, Engineering 20*f*, in Marine Engines and Boilers, for students who wished simply to supplement their instruction in Mechanical Engineering with a further study of the designing of machinery and boilers for marine purposes — it was not planned as a complete course for students in marine engines or naval architecture; one course, Engineering 20*g*, on Machinery and Boilers for Power Stations, intended as a continuation of the course on the Designing of Machinery and Boilers, Engineering 14*b*; one course, Engineering 20*i*, on Specifications and Cost Data for Civil Engineering Construction, for Graduate Students who wished instruction and practice in making out estimates on large work; one course, Engineering 20*j*, on Commutation in Direct-Current Machines, planned mainly as an application to the design of direct-current machinery.

All of these courses were intended for Graduate Students returning for the professional degree of Master in Engineering. There were four such students in this first year of their special designation as part of the advanced work in the Graduate School of Applied Science. While the number was small, the seriousness of purpose evinced by the students made the courses extremely interesting to the instructors. It is doubtful, however, if such advanced courses can ever be made attractive to large numbers of students without first-rate opportunities for research in Engineering laboratories where theoretical study can be combined with observation on practical matters relating directly to the Engineering profession. The first questions

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asked by students who are seeking advice after they have graduated from college relate to the bearing of courses upon their future careers in Engineering; and anything which looks like theoretical study without application or experiment in some kind of industry is avoided. And the judgment of students that they want laboratory experience seems, on the whole, sound.

Besides the new courses for Graduate Students, a new course in Mathematics was added as an alternative for the three half-courses, Algebra (Engineering 1*a*), Trigonometry (Engineering 1*b*), and Analytical Geometry (Engineering 1*d*); now commonly given to first-year students expecting to go into some kind of Engineering. It was hoped that the time of students might thus be employed to better advantage, by giving them these three subjects in sequence, or in such relation to one another that the same topic should not be covered more than once. The hours required were established at three two-hour periods per week, in order to secure a large amount of problem work under the immediate supervision of the instructor.

A similar change was made in Calculus (Engineering 1*c*) by expanding it to three two-hour periods of lectures and problem work, in place of three one-hour lectures.

These two changes in the mathematical courses followed naturally upon the experience with Statics and Kinetics, which have been so successful under the direction of Professor Johnson and Professor Huntington that it seemed worth while to introduce the system elsewhere. So far as could be judged by the experience of the year, the change was well suited to the needs of the average student who takes Mathematics because it is prescribed, and who should have close contact with the instructor for conference and help, — the exact position of most students who contemplate going into Engineering. While the change indicated considerable improvement on the average, there is nothing to show that the brighter students might not have done as well with Mathematics as formerly given.

The course in Machine Design (Engineering 14*a*) was increased from a half to a full course, for the purpose of improving the drafting work of students of Engineering. There is no doubt that Professor Kennedy is thus able to send students into the Senior Class much better fitted to profit by their instruction.

At the Squam Lake Camp, the course in Railroad Engineering (Engineering 4*d*) was expanded to a full course by giving five weeks instead of three to the subject. The course in Geodetic Surveying, Engineering 4*e*, was increased from two weeks to three weeks. Inasmuch as this subject is very special, and would ordinarily be

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taken only by students expecting to enter the Coast Survey, it was made optional for civil engineers. In this connection, it may be added that the instruction at the Camp was attended with its usual success under Professor Hughes. The total number of full-course enrolments for the summer was two hundred and one, of which eight were in Statics, Kinetics, and Resistance of Materials, leaving one hundred and ninety-three in Surveying and Railroad Engineering. The unexpected rise in provisions, which came after the fees for the summer had been fixed, was the cause of a small deficit in maintaining the Camp. To the difficulty of the situation was added a large amount of repair work, on which the cost was considerably higher than in former years. It will be necessary in the future to put by a small sum every summer for repairs, changes, and additions. There should be a good road leading to the water front, and the kitchen should be moved to a higher grade, whence all drainage might be led through the filter beds before running into the lake, instead of being pumped, as at present. To accomplish fully the purposes for which the Camp was established, the University should assume part of the running expense, such for instance as paying part or all of the salaries of the instructors. It hardly seems fair to charge against the student fees changes and additions that would add much to the convenience and usefulness of the Camp. The Division of Engineering hopes to make the property even more useful to the University by the introduction of other courses.

The full-course enrolments are given in the following table for the past three years: —

| | 1904-05 | 1905-06 | 1906-07 |
|---|---|---|---|
| Total full-course enrolments | 1450.5 | 1364.5 | 1221.0 |
| First-year Mathematics | 204.5 | 195.5 | 112.5 |
| Engineering subjects, including Calculus | 1246.0 | 1169.0 | 1108.5 |

This table shows a small falling off, which might very well have been expected in the transition period following re-organization and the gradual disappearance of the four-year courses. This falling off seems to have taken place mainly in first-year Mathematics, and can easily be accounted for. It is but natural that students registered in the College should take their Mathematics in the Department of Mathematics, and it would probably be better to teach all the first-year Mathematics for engineers in that Department. Calculus for engineering students should perhaps be continued indefinitely in the Division of Engineering, as a distinct saving of time can be effected in connection with Applied Mechanics, and the same instructor now gives both subjects. In returning Elementary Mathematics to the

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Mathematics Department, if that should seem desirable in the future, some account should be taken of the different attitude of mind of students who take Mathematics as an elective and of those who take it because they have to. By organizing the classes into sections of comparatively small numbers, this difference can be taken care of.

Another influence which has probably affected the numbers in Engineering has been the more uniform enforcement of entrance requirements by a single committee acting for all undergraduates. This has undoubtedly served to lift the grade of students who enter for science and, as there is a noticeable improvement, has made the teaching of Engineering much more satisfactory. There have also been during the past four years some changes and reduction in the number of courses offered by the Division, for the purpose of lightening the work of the teaching staff. The above table shows the full-course enrolments in Engineering, but it does not represent the number of students who are working towards an Engineering degree. Judging from those who have sought advice, the number has not decreased, but on the contrary has increased considerably, and the preparation has seemed strikingly improved. The seriousness of purpose of the students has been very refreshing, and one evidence of this is in the increase of interest in the Engineering Society, as shown by better attendance and generally better meetings. The activity of the students in small groups, like the Electrical Club and the Mechanical Club, has been marked.

The Division has continued to take advantage of the numerous manufacturing establishments in the neighborhood of Boston for the instruction of students, and a number of interesting tests were run during the year. The great difficulty about such tests, however, — in fact, an almost insuperable objection, — lies in their lack of completeness. In few cases can the conditions be made favorable to scientific accuracy, on account of the expense necessary in changing the piping systems, and in general in arranging for accurate observations. No firm cares to make additions or modifications in an established plant for the purpose of assisting a college or university, although the greatest courtesy is often extended in permitting students to examine and test machinery and boilers as they are fitted. It would be hardly reasonable to expect a power station to interrupt its service for the purpose of facilitating experiments which do not yield even a small commercial return. Under ordinary circumstances, therefore, the only method of doing really satisfactory work will be found in the laboratories belonging to the University, where conditions can be made entirely suitable for extended experi-

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ment. At present, the laboratories at Harvard are deficient of nearly everything approaching a commercial scale. They are suited for undergraduate instruction and for teaching young men how to make accurate observations, but they are of comparatively little use in getting results which would serve to stimulate the study of Engineering in the whole student body.

The experience of the year has indicated the necessity of some revision of the programme of studies for Engineering degrees. With the disappearance of the four-year courses of the Lawrence Scientific School, this revision can be brought about rationally and to the great simplification of the work in the new Graduate School. When framing a five-year course under the conditions of keeping the four-year course for Engineering students, the Division found itself in the position of making troublesome compromises. Then, too, the old programmes were somewhat overcrowded for the ordinary student. The addition of one year to the time required for the first degree in Engineering will permit the instruction to be strengthened and to be spread over a longer period. It should not be forgotten that the instruction in Engineering must be planned for the average student much more than for one of such exceptional talent for Engineering that he would become an engineer after almost any kind of a college course. It is, therefore, the ordinary boy that we must take care of, with the expectation of offering exceptional opportunities to brighter men entering the last year of the Graduate School. The University cannot hope to do more in the Graduate School of Applied Science for Engineering than in the old Scientific School excepting in laboratory research as the great stimulus for study. Engineering is after all nothing more than the application of Physics, Chemistry, and Mathematics to commercial industry and construction. If the commercial relation is lost sight of in the advanced courses, as distinct from elementary and fundamental subjects, these courses fail in effectiveness. The question then comes to this: Can a student do as well for himself by spending a fifth year in the study of Engineering as he can by spending that year in the practical application of his profession? We hope he can; and to much better advantage here at Harvard. We are sure that he can with the equipment in Engineering that the University ought to have for that purpose.

During the year Professor L. S. Marks was in Germany on leave of absence, studying internal combustion motors and visiting various technical schools and manufacturing establishments. His work was taken by Mr. S. A. Reeve, Mr. A. H. Morse, and Professor Hollis.

IRA N. HOLLIS.

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# THE PSYCHOLOGICAL LABORATORY.

To the President of the University: —

Sir, — The year of this report was the first year spent entirely in the new Psychological Laboratory in Emerson Hall. Thus it has naturally demanded many minor improvements and readjustments in the technical outfit of the new institution; but, on the whole, the new laboratory showed itself satisfactory and well-fitted in every particular. The equipment has been supplemented during the year by valuable optical and acoustical instruments, especially photometers, so-called tone variators, microscopical attachments to the stereopticon, and so on. Much attention has been given also to the further development of the mechanical workshop, which is now fully prepared to fulfil all the demands of the laboratory. One room has been carefully fitted up for the special needs of aesthetic experiments.

The work of the laboratory has proceeded in the traditional path. All the instructors of the laboratory feel with great satisfaction the change which results from the fact that the material for experimental demonstration in all the psychological lecture courses can now be brought easily to the lecture rooms. The chief activity of the laboratory belongs again to the research work.

The following investigations have been carried out during the year: In the field of human psychology Mr. E. P. Frost began a systematic study of correlations between individual differences. The investigation, which will demand several years, tries to bring out with the subtlest methods of modern psychology how far variations of the mental personality in one direction carry with them variations in other directions. Mr. C. A. Barnes studied the psychology of arithmetical processes, especially by the method of time measurement of calculations under various conditions, in thousandth parts of a second. Mr. T. Nakashima began the study of the latent period of feelings, examining the time necessary to produce pleasure and displeasure. The problem of feeling was approached from another side by Mr. H. Taylor. He studied the relations of feelings to physical attitudes, especially to contraction and relaxation of muscles. Mr. H. M. Sheffer entered into an analysis of the memory processes by examining the relative value of associations by similarity and associations by contiguity. Mr. B. P. Boultenhouse also studied the

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processes of memory, comparing, in the interests of educational psychology, the memory for events, actively and passively experienced; he also began another investigation of symmetrical tactual sensations. In the field of visual sensations the chief study was that of Mr. A. Mitchell who determined the visual threshold on opposed points of the retina. Mr. C. A. Pierce started an experimental study of the mutual inhibition and re-enforcement of ideas. Miss E. L. Davis continued the long series of aesthetic studies of the laboratory by an experimental study of the pleasure in vertical divisions.

In the field of animal psychology Mr. C. S. Berry carried to completion his study of the imitative tendency of the Manx cat. He submitted as his doctor's thesis a discussion of the imitative tendency in animals, a part of which has been printed under the title, "The Imitative Tendency of White Rats," in the Journal of Comparative Neurology and Psychology, Vol. XVI. Mr. T. Nakashima conducted an inquiry into the modifiability of behavior in the larvae of the beetle *Tenebrio molitor*. Mr. O. S. Ricker studied the habits and the process of habit-formation in certain lizards. Dr. Karl Waugh completed his experimental investigation of the visual capacity of the mouse, and submitted a doctorate thesis on that subject.

Of the experimental work of the instructors there may be especially mentioned Professor E. B. Holt's investigations on the vision of colors in the neighborhood of the blind spot, and Dr. R. M. Yerkes's studies of the senses and educability of the dancing mouse, with special reference to Weber's Law and to the relation of modifiability of behavior to age. Dr. Yerkes's complete experiments with this animal are included in his recent important volume, "The Dancing Mouse, A Study in Animal Behavior" (New York, Macmillan Co., 1907, 290 pp.). My own experimenting was mostly concerned with problems of applied psychology, especially with the relation of experimental psychological methods to medicine and law.

The most notable improvement in the whole life of the laboratory has resulted from the permanent appointment of a trained mechanic. The laboratory had been dependent until then upon the very irregular work of the mechanical workshops in Boston, or had to demand an unreasonable amount of time and energy from instructors and students for the technical preparation of the experiments. Our mechanic, Mr. Kelley, a graduate of the Cambridge Manual Training School, and the excellent workshop of the laboratory have brought a remarkable improvement into the technical conditions of the work. His salary is paid from a part of the permanent income of the laboratory for equipment and work which our anonymous benefactor

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endowed. As the remaining part is fully sufficient for additional instruments each year, the laboratory is sufficiently provided for its real work. We feel therefore, all the more, the lack of funds for the publication of our work. The first two volumes of the Harvard Psychological Studies (Boston, Houghton, Mifflin & Co.) could be published only by special donations, as the very technical character of the contents makes it almost impossible that the expense of printing these volumes of 650 pages each could be covered by sale. A fund from which the third and the following volumes might be published at the rate of one volume a year is thus our most immediate need.

HUGO MÜNSTERBERG,
*Director of the Psychological Laboratory.*

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# THE OBSERVATORY.

To the President of the University: —

Sir, — The principal return of an astronomical observatory, for the money expended upon it, ordinarily consists of its publications. By this test, the cost of each volume is very great, many times that of the mere cost of printing. A restriction in the publication funds is therefore a very unwise economy. At the Harvard Observatory, every effort is made to secure a large return for the money expended. Besides the Annals, important minor publications are made, numerous discoveries are announced, and the collection of astronomical photographs furnishes a never ending source of information regarding the condition of the sky, which increases in value with each successive year. The unrestricted gift of Mr. Charles S. Fairchild, of five thousand dollars, which has been duplicated according to agreement by another donor, is permitting a great extension to be made in the work of publication. An increase in the force of assistants available for the study of the photographs and a suitable building for the astronomical library are still urgent needs.

The large number of publications of this Observatory and of objects of various kinds discovered here render desirable a comprehensive notation to designate them. Accordingly, the letters H. A., followed by a number, will be used to indicate the Harvard Annals, H. B. the Bulletins, H. C. the Circulars, and H. M. the Harvard Map of the Sky. H. N. will indicate nebulae and clusters discovered here, and H. V. new variables. H. P. indicates the Harvard Photometry, in H. A. **14**, and H. R. the Revised Harvard Photometry, in H. A. **50**.

*East Equatorial.* — The observations with this instrument have been made by Professor O. C. Wendell, and have been of the same general character as in previous years. Nearly thirteen thousand photometric comparisons have been made, principally with the polarizing photometer with achromatic prisms. A large part of these measurements relate to stars of the Algol type, and serve to determine their light curves and times of minima. Measurements for determining the correction to the period have also been made, when the light was varying most rapidly. Observations of several other

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known variables, not of the Algol type, have also been made. Many stars of doubtful variability have been observed, since the accuracy of the measurements permits even slight changes to be detected with certainty. Fifteen hundred measures have been made of the light of the asteroids, Iris (7), Eros (433), and Kreusa (488), to determine the nature of their variability. Thirteen hundred similar measures have been made of 32 stars having spectra of the fourth type, and the variability of several of these has been established.

With a second photometer adapted to the measurement of adjacent objects, twenty-six hundred measurements of double stars have been made. Twenty-three eclipses of Jupiter's Satellites have been observed photometrically, making 837 in all.

*Meridian Circle.*—H. A. **62**, Part I, was printed during the period covered by this report. It contains the observations of the fundamental stars for the zone $-9°\ 50'$, to $-14°\ 10'$, and the adopted constants of reduction for the zone stars. The corrections, depending upon these constants, have been applied to more than three fourths of the zone observations, and the results have been collected for about one fourth of the zones. It is expected that the final discussion of the zone observations will be far advanced, if not completed, in a few months.

The appointment as "Assistant Emerita" of Miss S. C. Bond, for nearly thirty years a computer in this department of the Observatory, establishes a precedent which it is hoped may be followed in other similar cases. Such appointments, in the case of women, have been rare.

*Meridian Photometers.*—With the 12-inch Meridian Photometer, 37,140 settings have been made by the Director, on 87 nights. In all, 613,904 settings have been made with this instrument during the last nine years. The reduced number of observations, made during the last year, has been due partly to the want of a recorder, and partly to the completion of the work assigned to this instrument. New work was not undertaken, since it was expected that better observations could be made, and extended to much fainter stars, with the 60-inch reflector. The mounting of the latter instrument is still unfinished, but it is hoped that its completion will not be delayed much longer.

The work of the 4-inch Meridian Photometer may now be regarded as practically completed. The results, however, are scattered through eight volumes of the Annals. The results for all the brighter stars, from the North to the South Pole, have been collected in a single volume entitled the Revised Harvard Photometry. The

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work, which is nearly all in type, will contain a Catalogue of 9110 stars of the magnitude 6.5, and brighter. It will furnish the class of spectrum, as well as the magnitudes of these stars as given in each of the various volumes of our Annals, and also the magnitudes given in other photometric catalogues.

### Henry Draper Memorial.

The number of photographs taken with the 11-inch Draper Telescope was 356, making 17,035 in all; with the 8-inch Draper Telescope, 611, making the total number, 34,886. The entire number of photographs of the stars taken at Cambridge during the year is 3,200. Nine eclipses of Jupiter's Satellites have been successfully photographed with the 11-inch Draper Telescope. The spectra of 456 stars, taken with the 11-inch Draper Telescope, have been studied in detail and classified by Miss Cannon. A catalogue giving the class of spectra of more than twelve hundred stars, north of declination $-30°$, and not contained in H. A. **28**, is thus nearly completed. A similar classification of 745 southern stars, taken with the 13-inch Boyden Telescope, has also been made.

Mainly from the study of the photographs of spectra taken with the 8-inch Draper, 8-inch Bache, and 24-inch Bruce Telescopes, Mrs. Fleming has found 19 new variable stars, 5 stars of the fourth type, 1 of the fifth type, 6 in which the hydrogen line $H\beta$ is bright, 1 gaseous nebula, and 3 in which the spectra are peculiar. Nova Velorum was also found independently from its spectrum which had become like that of a gaseous nebula. The hydrogen lines have been found to be bright in 4 known variable stars, R Geminorum, RT Herculis, SX Cygni, and 230909 — Pegasi. The spectrum of V Ophiuchi is of the fourth type. Nine meteor trails were found on chart plates. Much work has been done in examining and classifying spectra of stars contained in H. A. **50**, too faint to be photographed with large dispersion, or whose class of spectra was given as doubtful in the Draper Catalogue. One new variable star has been found by Miss L. D. Wells. Sequences of comparison stars for 222 variables, mainly found from the presence of bright hydrogen lines in their photographic spectra, have been selected and measured by Mrs. Fleming, and published in H. A. **47**, Part I. The relative positions and photographic magnitudes of about three thousand stars are included in this work. Photographic standards of magnitude are thus furnished for these variables. It is hoped that later the magnitudes of all may be reduced to a uniform and standard scale.

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### Boyden Department.

The Arequipa station has remained in charge of Mr. R. H. Frost, the senior assistant there. The number of photographs taken during the year, with the 13-inch Boyden Telescope, is 429, making 11,847 in all; with the 8-inch Bache Telescope, 961, making 38,224. The total number of stellar photographs taken during the year is 2,719. The Bache Telescope, which was sent to Cambridge for repairs, was returned to Arequipa, remounted, and the first photograph was taken with it on April 20, 1907. The number of settings with the meridian photometer was 1,784; with the Rumford photometer, 2,316; with the double-star photometer, 736; total, 4,836. 317 observations have also been made, of 50 southern variables of long period.

Meteorological observations, three times a day, have been continued as in former years, and visual observations of the cloudiness have been made hourly throughout the year.

### Bruce Photographic Telescope.

The number of photographs taken with the 24-inch Bruce Telescope was 372, of which 45 are spectrum plates, and 61 are charts having exposures of one hour, or more. The total number of photographs so far taken with this instrument is 8,514. These plates continue to be the most valuable in the observatory, for the study of very faint objects. The large scale also renders them very useful when accurate positions are to be determined. This instrument, as well as some of the smaller instruments, is used for the determination of photographic magnitudes, by photographing two regions on the same plate, under precisely similar conditions. A number of the regions selected by Kapteyn have also been photographed with exposures of 120 minutes.

About seventeen hundred new nebulae have been found from the Bruce photographs, by Messrs. Bailey, Frost, and Stewart. In general, with exposures of one hour, the number shown is about equal to that already known, while with exposures of four hours, the number is often many times as great.

### Blue Hill Meteorological Observatory.

The work of the Observatory was performed, under the direction and at the expense of Professor Rotch, by the same permanent staff as in preceding years. Apart from the routine observations, the

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principal work has been, as heretofore, the exploration of the upper air with kites. The kite-windlass was rebuilt, and a gasoline motor substituted for the steam-engine, but with unsatisfactory results. This and insufficient wind interfered with the kite-flights on the nineteen term-days appointed by the International Committee for Scientific Aeronautics, so that of the sixteen flights at Blue Hill but seven could be made on the prescribed days. The average of the greatest heights attained in each flight was 6,037 feet above sea-level, and the maximum in any flight, 12,060 feet. During the week in July, which was designated for the international exploration of the atmosphere, kites were also flown, by the Observatory, near the base of Mount Washington, New Hampshire, and observations were obtained daily, either in the free air up to the level of the summit (6,300 feet) or on the mountain itself, where a meteorograph was maintained during the summer by Mr. S. P. Fergusson. Another grant from the Hodgkins Fund will enable a final series of *ballons-sondes* ascensions to be made at Saint Louis during the autumn, at a time when observations at great heights are lacking in America.

### Miscellaneous.

*Variable Stars.* — The visual observations of long period variables have been maintained throughout the year, the working list at Cambridge now containing 324 stars. Mr. Campbell has made 896 observations of them with the 24-inch reflector and 654 with the 5-inch telescope and a field glass. Miss Cannon has made 489 observations and Mr. Manson 180, both with the 6-inch West Equatorial. The observations of those visible during the latter part of the night only have been made by Mr. Campbell and Mr. Manson. 1,112 observations have been communicated to the Observatory, of which 661 were received from Miss Whiteside, now of Whitin Observatory, 207 from Professor Whitney of Vassar College, 83 from Mr. Eadie, 72 from Miss H. M. Swartz, 51 from Mr. Paul Blanc, and 38 from Mr. Felix de Roy. The total number, including 317 of fifty southern variables, made at Arequipa, is 3,648. The contributions to Popular Astronomy of the approximate magnitude of these variables, for the first of each month, compiled by Mr. Campbell, have been continued. The observations of Seventy-five Long Period Variables, during the years 1902 to 1905, and a discussion of these observations, and also of those contained in H. A. **37**, have been printed in H. A. **57**, Part I. Part II of the same volume, containing lists of comparison stars for 250 long period variables, is nearly ready for printing.

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The success which has attended the examination of the photographs, for the discovery of new variable stars, by the superposition of a series of negatives upon a positive contact print made from one of them, suggested the extension of this method to the entire sky. Accordingly, the 55 photographs, forming the Harvard Map of the Sky, are now being examined in this way. Regions 3, 6, 9, 12, 15, 18, 21, 48, and 51 have been examined by Miss Leavitt, and 93 new variables found. 37 variables, found in Region 50, were announced last year. Regions 37, 46, 62, and part of 31, have been examined by Miss Cannon, and 31 new variables found. Regions 2, 5, 44, and 53 have been examined by Miss Leland, and 8 new variables found. It appears probable that about one third of all the variables of the eleventh magnitude and brighter have already been discovered, and that one third will be found in this investigation.

The Second Catalogue of Variable Stars, by Miss Cannon, H. A. **55**, Part I, is the most complete work of its kind as yet published. Of the 3,748 known variable stars, 2,909 have been discovered here. H. A. **60**, No. 4, gives accurate positions of 1,777 variable stars discovered by Miss Leavitt in the Magellanic Clouds, and H. A. **60**, No. 5, is a memoir on ten Algol variables discovered and discussed by her.

*Needs of the Observatory.* — The gifts already mentioned have provided, for the present, in a very satisfactory manner, for one of the most urgent needs of the Observatory, the publication of its Annals. They also have permitted a small increase in the number of assistants engaged in the study of the photographic plates. The amount of valuable material contained in these plates is indeed vast. Every day, examples occur of the ease and economy with which astronomy may thus be advanced. An admirable field of work for women has been opened, and a great increase in the number now engaged in this work is much to be desired. The want of a fireproof building for the library is still unsupplied. A moderate sum only is needed to erect an extension of the building now used for storing the photographic plates. This would permit a large part of the library to be housed safely.

*Observatory of the Rev. J. H. Metcalf.* — It is the policy of the Harvard Observatory to aid, when possible, specialists who display marked skill in any department of astronomy. Coöperation has accordingly been established and continued with the Observatory of the Rev. J. H. Metcalf, so that the work there has been materially extended. This secures for the Harvard Observatory the immediate use of many excellent photographs, and the eventual possession of

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certain valuable instruments. During the past year, Mr. Metcalf and his assistant have taken 200 photographs with a 12-inch doublet constructed by him. The greater portion of these plates were made by following upon a star, and giving an additional motion to the plate equal to that of an asteroid. This method proves extremely effective in discovering and following asteroids, and has led to the discovery of 33 asteroids, and of comet 1907 b, by Mr. Metcalf. The planet Eros also was found readily on July 4, 1907, on the first photograph taken for this purpose.

*Library.* — The Library of the Observatory has been increased by 346 volumes and 1,455 pamphlets. The total numbers of volumes and pamphlets in the Library on October 1, 1907, were 12,224 and 25,225, respectively. This collection, one of the finest of its kind in the world, is in constant danger of destruction by fire, and is scattered through the rooms of the Observatory. A suitable building to contain it is one of our greatest needs.

*Telegraphic Announcements.* — Thirty telegraphic announcements have been issued. Of these, eight were received from the U. S. Naval Observatory, six from the Lick Observatory, four from Kiel, three from Rev. Joel H. Metcalf, two from the Students' Observatory, Berkeley, Cal., two from Professor Cogshall, and one each from Professors Morgan, Paine, Comstock, Lowell, and Daniel. The syllabic code, devised by Mr. Gerrish, has continued to give entire satisfaction. For this no code book is required, and a pamphlet furnishing all necessary information will be sent gratuitously, on application. Announcements will be received at this Observatory by telegraph, preferably according to this system, for transmission to Kiel, and for distribution in America. The Astronom Centrale, at Kiel, is prepared to receive announcements in the same system, from other countries than Europe.

Cablegrams intended for this Observatory should be addressed "Observatory, Boston"; and all telegrams, "Harvard College Observatory, Cambridge, Mass." All correspondence relating to telegrams should be addressed to the Director.

These telegrams continue to be supplemented by neostyle bulletins which are printed as soon as the telegrams have been sent off, and distributed by first-class mail. Translated messages together with additional information are thus promptly circulated. 51 bulletins, making 306 in all, have been distributed in this way.

*Publications.* — The gifts mentioned above, together with the introduction of the monotype, by the Publication Agent, have enabled a great increase to be made in the publications of the Observatory.

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H. A. **47**, Part 1; **52**, Part 1; **55**, Part 1; **57**, Part 1; **60**, Nos. **1**, **2**, **3**, **4**, **5**, and **62**, Part **1**, have been published and distributed this year. Owing to the delay in the preparation of the material intended for publication in H. A. **49**, this number has been assigned to the Meteorological Observations at Arequipa, 1892 to 1895. 103 pages, forming the whole of Part **1**, are in type, and the remainder of this volume is ready for the printer. 197 pages of H. A. **50**, the Revised Harvard Photometry, 53 pages of H. A. **52**, Part **2**, Eclipses of Jupiter's Satellites, and 47 pages of H. A. **58**, Parts **3** and **4**, Blue Hill Meteorological Observations, are in type. Accordingly, the completed Volumes are **1** to **46**, **48**, **51**, and **53**. Also, H. A. **47**, Part **1**; **52**, Part **1**; **55**, Part **1**; **56**, Nos. **1**, **2**, **3**; **57**, Part **1**; **58**, Parts **1**, **2**; **60**, Nos. **1**, **2**, **3**, **4**, **5**; and **62**, Part **1**.

It is the policy of the Harvard College Observatory to render the results of its work as widely accessible as possible. For this reason, large editions of its Annals are published, of which portions only are distributed. They are sent without charge to all the principal observatories and libraries of the world, to a few individuals who it is thought could make use of them, and to a few who it is desirable should be kept informed of the nature and progress of the work. To extend the use of these volumes, and to make sure that they are not wasted by giving them to those who are not likely to use them, it is now proposed to restrict the distribution made to individuals, and to sell copies of the later volumes at a nominal price, which about covers the cost of paper and printing.

Twelve circulars have been issued, whose numbers, titles, and dates are as follows: —

119. Observations of Phoebe in August and September, 1906. November 6, 1906.
120. Thirty-one New Variable Stars. November 10, 1906.
121. *105853*. Nova Velorum. H 1268. November 12, 1906.
122. Thirty-six New Variable Stars. November 24, 1906.
123. Photographs of Faint Stars. January 19, 1907.
124. Stars having Peculiar Spectra. 18 New Variable Stars. January 26, 1907.
125. Standard Stellar Magnitudes. February 25, 1907.
126. Two Variables Discovered by M. Baillaud. February 25, 1907.
127. New Variable Stars in Harvard Map, Nos. 3 and 6. April 12, 1907.
128. Missing Durchmusterung Stars. April 26, 1907.
129. 15 New Variable Stars in Harvard Maps, Nos. 31 and 62. May 10, 1907.
130. 71 New Variable Stars in Harvard Maps, Nos. 9, 12, 21, 48, and 51. July 13, 1907.

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Besides the more important publications which have been described above, numerous minor publications have been made by the officers of the Observatory, and are summarized in the University Gazette.

*Buildings and Grounds.* — The temporary character of the greater portion of our buildings was illustrated by a fire in the residence on March 4, 1907. The entire structure, together with the East Wing of the Observatory, would have been destroyed, but for the prompt action and efficiency of the fire department of the Observatory. Practice drills, without warning, have been maintained every few weeks for several years, in which every officer of the Observatory is expected to participate. By immediate response to the fire signals, the fire, which was rapidly gaining an uncontrollable headway, was extinguished before the arrival of the fire department of the city.

EDWARD C. PICKERING, *Director.*

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# THE MUSEUM OF COMPARATIVE ZOÖLOGY.

To the President and Fellows of Harvard College: —

It is well to recall in the centenary year of the founder of the Museum of Comparative Zoölogy the indebtedness this Museum owes, in common with similar institutions, to the genius of Louis Agassiz. With broad interests in the investigation, instruction, and the popularization of natural science, he planned the division of this Museum into research collections and into collections for exhibition, at a time when large collections of specimens were useful to professional naturalists alone. For the research collections his zeal knew no bounds, and the investigator in problems in variation, for instance, as a result of that zeal, finds to-day, in certain fields, extensive series of specimens not easily duplicated elsewhere. For purposes of instruction and for the popular exhibition of animal life, Professor Agassiz departed from the usual custom of one great systematic series with very many specimens crowded together, and established the principle of the selection of a small number of characteristic forms, associating recent species and their skeletons in juxtaposition with fossil forms. Moreover, Professor Agassiz's three ideas — first, *synoptic* collections showing the principal types of form and structure; secondly, *systematic* collections with a more extended, though limited, series of typical specimens; and thirdly, *faunal* collections, where the main facts of the geographical distribution of the animals of the earth and ocean are shown — have the same interest and importance they had when the Museum was founded in 1859, and have given the Museum of Comparative Zoölogy an individuality and character of its own.

The late Dr. Charles F. Folsom was a member of the Committee appointed by the Overseers to visit the Museum from 1891 until his death, August 20, 1907; he was also a member of the Committee on zoölogical instruction for the year 1906–1907. Dr. Folsom's interest in the work of these committees was genuine and disinterested. He was instrumental in securing for the Museum the Edward A. and Outram Bangs collection of American mammals.

In the Academic year 1906–1907, twelve courses in Zoölogy were given by Professors Mark, Parker, Jackson, Castle, and Dr. Rand to two hundred and seventy students in Harvard University, and five

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courses were given to thirty-three students of Radcliffe College. The assistants in the University courses were Messrs. A. M. Banta, H. B. Bigelow, W. S. Burgess, E. D. Congdon, H. S. Davis, C. O. Esterly, J. A. Long, F. F. Marshall, R. C. Mullenix, and W. E. Wing.

Mr. Manton Copeland assisted in two of the courses given in Radcliffe College.

Five students, while at work at the Bermuda Biological Station for Research, received aid from the Humboldt fund.

The instruction in the Department of Geology and Geography was given by Professors Davis, Jackson, Ward, Woodworth, Johnson, and Dr. Mansfield, assisted by Messrs. J. W. Eggleston, F. H. Lahee, H. E. Merwin, E. J. Saunders, and F. H. Sawyer; eighteen courses were given to three hundred and seventeen students of Harvard University, and four courses to twenty-five students in Radcliffe College.

Mr. F. H. Lahee held the Josiah Dwight Whitney scholarship for the year.

In December, 1906, the Faculty appointed Mr. R. W. Sayles Assistant in charge of the exhibition collections in the Geological section of the Museum.

To Mr. Agassiz the Museum is indebted for a model of Bora Bora, a masterly piece of workmanship by Mr. George Carroll Curtis. In November, 1899, while exploring the Tropical Pacific, Mr. Agassiz visited Bora Bora, the most striking of the Society Islands, and an excellent type of the structure and mode of formation of the coral reefs of the group. At the instance of Mr. Agassiz, Mr. Curtis went to Bora Bora in 1904, spending several months there, and from personal surveys and soundings, supplemented by other accessible data, executed this model. Bora Bora is approximately five by three miles in diameter; its central volcanic peak rising to a height of over 2,500 feet and surrounded by a wide lagoon, the wide barrier-reef flat, the narrow fringing reef, and the steep sea slope, are all well brought out by Mr. Curtis. The scale employed is 1–3,600. With the eye at sea level, the natural elevation is obtained.

To install this model in the centre of the Coral room, the Crawfordsville series of crinoids has been removed to new cases built around the rails of the gallery devoted to echinoderms.

From Mr. William Barbour's generous gift for present use, we have obtained, in addition to the egg of the Great Auk mentioned in the Report for 1905–1906, the following specimens: — a series of

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Hawaiian fishes mounted by Mr. Sherman F. Denton and on exhibition in the Pacific room; a very nearly complete skeleton of the Dodo from Mauritius; an exceptionally large and perfect egg of *Aepyornis* (*? maximus*); an extensive series of bones of the Great Auk from Funk Island; a fine collection of European myriopods collected and identified by Dr. Karl W. Verhoeff of Dresden; and an interesting series of specimens, chiefly invertebrates, selected from Alan Owston's stock. In addition to the above mentioned material, Mr. Barbour's gift has enabled the Museum to build and equip sixteen large storage cases for the Ornithological department.

From Mr. Thomas Barbour's collecting trip to India, Burmah, the Dutch East Indies, and New Guinea, the Museum will benefit largely. Mr. Barbour, though chiefly interested in the lower vertebrates, devoted his energies in a most catholic spirit to other groups, and got together large series of specimens, including echinoderms, crustaceans, spiders, insects, and other invertebrates, also birds and mammals, all of which he has presented to the Museum, and upon which we hope to publish several Bulletins. Mr. Barbour has given us also a number of vertebrates selected in London, to fill gaps in our exhibition series, and some choice specimens which he purchased in Yokohama for our research collections.

The generosity of the New York Zoölogical Society, through its Director, Dr. W. T. Hornaday, and the Curator of reptiles, Mr. R. L. Ditmars, in presenting valuable material, has been acknowledged for many years. This material, mounted by its preparator, Mr. George Nelson, has enabled the Museum to improve its exhibition series of reptiles. In the Systematic collection, in the North American collection, and especially in the collection devoted to the Indo-Asiatic fauna, this improvement may be noted to a very marked degree; the Indian Python, *P. molurus*, 13 feet long, and the Reticulated Python, *P. reticulatus*, nearly 22 feet in length, show, in a most realistic manner, the power and magnificence of these monstrous animals.

When in Iceland in 1905, Messrs. J. W. Hastings and L. J. de G. de Milhau were good enough to arrange to have the Museum receive a series of the birds of Iceland, and we have already as a part of their gift thirty birds, either mounted or as skins.

By the kind offices of Dr. W. E. Castle, the Museum has added to its special collections two sets of specimens elucidative of Dr. Castle's work in inheritance. One of these, a series of five rabbits, shows the blending inheritance of ear characters with the alternative inheritance of coat colors, and the other, a series of Guinea-pigs,

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represents the fixation of an atavistic coat character, similar to that of the wild Cavy, but obtained by a cross between two simple color forms. Both of these series have been prepared for exhibition by Mr. Nelson.

The Museum is indebted to the U. S. National Museum for a series of ninety slides of the Foraminifera, (Albatross 1891 expedition), which formed the basis of the report of Goes, (Bull. M. C. Z., March, 1896, vol. 29, no. 1); this series is identified and labelled.

The Museum is likewise indebted to Dr. E. W. Dwight for a specimen of the Hawksbill turtle, to Dr. R. T. Jackson for some interesting fossils, and to Mr. Junius Henderson for some fossils and recent shells.

Many of the North American mammals on exhibition have been in the cases for a quarter of a century or more, so that the substitution of more modern mounts from fresh skins is desirable; this work is being carried on as opportunities occur, and two recent accessions, a female Caribou, *Rangifer caribou*, presented by Dr. H. B. Bigelow, and a young fawn, *Odocoileus virginianus borealis*, a gift of Mr. Thomas Emerson Proctor, are noteworthy.

Two new cases have been built in the African room, and the rearrangement and labelling of the specimens has been continued; new accessions include a fine male Lion (purchased) and a specimen of the striking White-tailed Guereza, *Colobus caudatus*, a gift of Mr. Thomas Barbour.

In the South American room a large floor case has been built; for the present, this case will be devoted, one half to animals peculiar to the Galapagos Islands, and the remaining half to the animals of the West Indies. Some progress has been made in the selection and installation of the specimens for both of these exhibits.

A series of specimens illustrative of bird architecture has been placed on exhibition in the room with the Scott collection of North American birds. Though as yet limited in extent and incomplete in some respects, the series has proved of great popular interest. The method of mounting is extremely simple, wholly without accessories, and yet one that allows a considerable number of nests and birds to be shown in a limited space without a crowded effect. The nests and accompanying birds have been mounted by Mr. Nelson, who has devoted not a little time towards collecting new material. For other contributions towards this exhibit, the Museum is indebted to Mrs. E. H. Hall, Messrs. Thomas Barbour, H. B. Bigelow, H. A. Purdie, G. P. Putnam, Roland Thaxter, and G. H. Thayer.

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The room devoted to animals under domestication has been opened, and the specimens ready for exhibition have been installed.

Work on the material selected for exhibition in the Mesozoic room is well in hand, but the opening of the room is necessarily deferred until next year.

Nearly the whole of the research series of fossil crinoids has been transferred to the new room above the Divinity Avenue entrance hall; another storage case will be required before all the fossil echinoderms can be brought together.

The Museum is under obligations to Messrs. Faxon, Brewster, Woodworth, Bangs, and Bigelow for the care they have taken of the collections under their charge. The reports of the Assistants give the usual details as to the additions received and the work accomplished during the year.

Mr. Agassiz spent about two months of exploration in the West Indies in the steam yacht "Virginia." Starting from Porto Rico, the "Virginia" worked as far south as Grenada and thence back to Santiago de Cuba. Considerable surface and intermediate collecting was done; the cruise also enabled Mr. Agassiz to accumulate additional information concerning the structure and history of the islands, and to check the results of his earlier investigations among them. Mr. Agassiz was accompanied by Drs. Woodworth and Bigelow as assistants.

The Library contains 43,518 volumes, and 38,026 pamphlets, 1,097 volumes, and 1,704 pamphlets having been added during the year.

Three numbers of the Memoirs, thirteen numbers of the Bulletin, and the Annual Report, a total of 658 (112 quarto, 546 octavo) pages, with 118 (65 quarto and 53 octavo) plates have been issued. The three Memoirs and six of the Bulletins contain reports on the scientific results of explorations carried on under Mr. Agassiz's supervision; one Bulletin is a contribution from the Geological Department; and seven Bulletins are reports upon various Museum collections.

The usual appropriation, $350, to assist in the publication of Contributions offered by the zoölogical and geological laboratories has been continued by the Corporation.

SAMUEL HENSHAW.

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# THE ZOÖLOGICAL LABORATORY.

To the President of the University: —

Sir, — For the first time it becomes my duty to record the death of an officer of the University connected with the Department of Zoölogy. Dr. Charles Follen Folsom, a member of the Committee appointed by the Overseers to visit the Zoölogical Department, died in New York on August 20, 1907.

The accompanying tables show the number of students attending each of the courses offered by the Department during the year 1906–07, the numbers printed in italics referring to students of the Lawrence Scientific School, or the Graduate School of Applied Science. The first table gives the indicated information for Harvard, the second for Radcliffe.

TABLE I.

| Courses 1906-07. | Grad. | Senior | Junior | Soph. | Fresh. | Special | Bussey | Total |
|---|---|---|---|---|---|---|---|---|
| Zoölogy 1 | 3 | 6+*1* | 13+*2* | 33+*3* | 63+*1* | 18 | 1 | 137+*12*=149 |
| " 2 | . . . | . . . | 11+*2* | 6+*3* | 7+*1* | 1 | . . . | 25+ *6*= 31 |
| " 3 | 3 | 8 | 5+*2* | 2+*1* | 1 | 1 | . . . | 20+ *3*= 23 |
| " 4 | 2 | 1 | . . . | 2 | . . . | . . . | . . . | 5 = 5 |
| " 5 | 5 | 2 | . . . | 1 | . . . | . . . | . . . | 8 = 8 |
| " 9*a* | 8 | . . . | . . . | . . . | . . . | . . . | . . . | 8 = 8 |
| " 9*b* | 2 | . . . | . . . | . . . | . . . | . . . | . . . | 2 = 2 |
| " 10*a* | 8 | . . . | . . . | . . . | . . . | . . . | . . . | 8 = 8 |
| " 10*b* | 7+*1* | 1 | . . . | . . . | . . . | . . . | . . . | 8+ *1*= 9 |
| " 14 | 6 | 2 | *1* | . . . | . . . | . . . | . . . | 8+ *1*= 9 |
| " 16 | 7 | 1 | *1* | . . . | . . . | . . . | . . . | 8+ *1*= 9 |
| " 20 | 9 | . . . | . . . | . . . | . . . | . . . | . . . | 9 = 9 |
| Sums | 60+*1* | 21+*1* | 29+*8* | 44+*12* | 71+*2* | 20 | 1 | 246+*24*=270 |

TABLE II.

| Courses, 1906-07. | Grad. | Sen. | Jun. | Soph. | Fresh. | Special | Total |
|---|---|---|---|---|---|---|---|
| Zoölogy 1 . . . . . | 1 | 1 | 2 | 4 | 10 | 1 | 19 |
| " 2 . . . . . | 1 | 1 | . . . | . . . | 3 | . . . | 5 |
| " 3 . . . . . | 2 | . . . | . . . | . . . | . . . | . . . | 2 |
| " 5 . . . . . | 1 | . . . | . . . | . . . | . . . | 1 | 2 |
| " 16 . . . . . | 3 | 1 | . . . | . . . | . . . | 1 | 5 |
| Sums . . . . . | 8 | 3 | 2 | 4 | 13 | 3 | 33 |

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Except for courses which alternate with each other, the formal instruction has not been materially changed from that of the preceding year.

Professor Parker had as chief assistant in the laboratory for Zoölogy 1 in Harvard Mr. E. D. Congdon, and as sub-assistants Dr. H. B. Bigelow, Messrs. W. S. Burgess, H. S. Davis, F. F. Marshall, and W. E. Wing. The laboratory work in Radcliffe was in charge of Mr. M. Copeland, as assistant.

Assistant Professor Castle thinks that a decrease in the number of students in Zoölogy 2 may have some connection with the new policy regarding tuition fees for extra courses. The chief assistant in this course was Mr. A. M. Banta, the sub-assistants being Messrs. E. D. Congdon, H. S. Davis, and R. C. Mullenix. Mr. M. Copeland was laboratory assistant for the course in Radcliffe College.

The number of students in Zoölogy 3, under Dr. Rand, was precisely the same as in 1905–06, but of these one completed the work of the first half-year only, and another was a special student of maturity who did the work of the first half-year without taking examinations or receiving credit. The regular assistant in the laboratory was Mr. C. O. Esterly, and Mr. J. A. Long also gave some time to assisting in this course. There were two students in the Radcliffe course and no assistant in the laboratory.

There were only slight changes in Zoölogy 4, the course being carried on by Professor Mark and Dr. Rand, as in previous years. In accordance with the plan adopted when Zoölogy 6 was announced, the lectures in Zoölogy 5 dealt with the broad outlines of vertebrate development, the subject of organogeny being reserved for the alternating course (Zoölogy 6). As usual, in the lectures most attention was given to the parts least readily mastered from text-book reading, and to the discussion of special questions. The laboratory work, as hitherto, was conducted by Dr. Rand, and was largely devoted to a study of the early stages of the chick. In one particular it was modified from that of former years; previous to the study of incubated hens' eggs considerable time was given to a study of the ovary of the guinea-pig, and to an examination of unincubated hens' eggs — both sections and dissections.

With the return of Assistant Professor Jackson after a year's leave of absence the courses in Palaeozoölogy were resumed. Both Zoölogy 9*a* and Zoölogy 9*b* had graduate students only.

At the suggestion of the Committee on Instruction, certain courses — in which the laboratory work consisted in the investigation of a separate problem by each student in the class — were

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transferred from the middle group of studies to that which is designated as "primarily for graduates." These were Courses 10*a*, 10*b*, 11*a*, 11*b*, 15, and 16.

The nature of the courses designated as Zoölogy 10*a* and 10*b* — conducted by Assistant Professor Castle — is succinctly set forth in the pamphlet of the Department for 1906–07. The lectures, owing to the rapid advance of knowledge in the subjects treated, require frequent revision. Some of the topics studied by the students in these courses were color and size inheritance in rats and rabbits, and the physiological differences between different color varieties of guinea-pigs. Some of the results obtained will be incorporated in future publications.

Following the plan adopted the previous year, the subject matter of Zoölogy 13, by Professor Parker, was so divided that the new half-course, Zoölogy 14, deals with muscular and sustentative tissues, while Zoölogy 13 is now to be limited to epithelial and nervous tissues. The lectures of Course 14, though based on a part of those of Course 13, have been expanded and are essentially new.

In Zoölogy 16, also by Professor Parker, each student was assigned a special topic for investigation. Of these, two have yielded results that are in preparation for publication. Two students studied the same subject in this course as that on which they were working in Zoölogy 20. Five students took the course in Radcliffe; two of them wrote theses, and three elected to do the laboratory work. Of the latter, two obtained results that will be offered for publication.

Of the eleven men who began researches in Zoölogy 20, two withdrew early in the year, one to do his work in another department of the University, the other for financial reasons. Seven of those who continued their work were under the direction of Professor Mark, one under Professor Parker, and one under Professors Mark and Parker jointly. Three students presented theses that were accepted, and passed the examinations for the degree of Ph.D.; the degrees were conferred at Commencement in June, 1907. The names of the students and the titles of their theses follow: Arthur Mangun Banta, *A Comparison of the Reactions of a Species of Terranean with those of a Subterranean Isopod;* Herbert Spencer Davis, *Spermatogenesis in Acrididae and Locustidae;* Calvin Olin Esterly, *The Light-recipient Organs of the Copepod Eucalanus elongatus.*

During the year Professor Parker has given much time to the interests of the Seventh International Zoölogical Congress, as chairman of the Executive Committee.

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Investigations in heredity — in which the Carnegie Institution of Washington is coöperating with the Laboratory — have been carried on by Assistant Professor Castle and by Professor Mark.

In connection with this work Professor Castle has published the following papers: (1) Contributions from this Laboratory No. 188 (with H. MacCurdy); (2) Yellow Mice and Gametic Purity. *Science*, 31 August, 1906, new ser., vol. 24, pp. 275–281; (3) On a Case of Reversion Induced by Cross-breeding and its Fixation. *Science*, 25 January, 1907, new ser., vol. 25, pp. 151–153. The results of these investigations have been presented by Professor Castle before the National Academy of Sciences, and the American Society of Zoölogists, likewise addresses before the Sigma Xi Society of the University of Michigan and the American Breeders' Association. A course of four lectures on heredity was also delivered by him before the Brooklyn Institute of Arts and Sciences.

Dr. Rand has made considerable progress with two lines of work on earthworms, and investigations on reactions to wounding of the tentacles in Actinians.

Professor Mark gave some time to the perfection of a machine for cutting the wax plates extensively used by morphologists in making models by reconstruction from microscopic sections. The cutting is rapidly and satisfactorily accomplished by the use of a fine platinum wire heated by an electric current and made to execute rapid vertical excursions by attachment to an ordinary sewing machine. In working out the details of this machine he had the valuable assistance of Mr. J. A. Long. The machine was exhibited in operation at the meeting of the National Academy in Boston in November, and at the meeting of the Association of American Anatomists in New York in December.

The inability of the Colonial Government of Bermuda to carry out its plan of erecting a building to accommodate the Public Aquarium and the Biological Station for Research, — owing to financial conditions following a reduction of the naval and military forces on the Islands, — caused an interruption in the work of the Station for the summer of 1906. Early in 1907, however, the Bermuda Natural History Society secured control of an island in Hamilton Harbor formerly used by the British government for the storage of munitions of war. The island is some three acres in extent, and has about a dozen substantial buildings. These have been converted into a public aquarium, laboratories for biological work, and quarters for lodging. Professor Mark was invited to take charge of the Station for Research. The session extended from June 21 to August 7.

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Fourteen persons were enrolled, eight of whom were or are connected with Harvard University. One of the fourteen enrolled was Professor Fisk of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington, who was detailed by the Director, Dr. L. A. Bauer, to continue and supplement the magnetic survey made in 1905 by Mr. John L. Cole, an account of which was given in my report for the year 1904–05. Professor Fisk's work was directed chiefly to determining the dip and intensity of magnetic attraction at a number of important stations. As Professor Mark was unable to sail for Bermuda before July, Dr. Rand was in charge of the Station from June 21 to July 5.

There have been published during the year the following contributions from the Bermuda Biological Station for Research: —

No. 9. CONGDON, E. D. — The hydroids of Bermuda. *Proc. Amer. Acad. Arts and Sci.*, January, 1907, vol. 42, pp. 461–485.

No. 10. BLACKMAN, M. W. — The spermatogenesis of the myriapods. V. On the spermatogenesis of Lithobius. *Proc. Amer. Acad. Arts and Sci.*, February, 1907, vol. 42, pp. 487–518, 2 pls.

Five persons received aid from the Humboldt Fund to the amount of $295.70 in the summer of 1907, while working at the Bermuda Station.

The Carnegie Institution of Washington made a grant of $300 to Professor Mark to aid in carrying on certain embryological investigations which required an unusual outlay for material.

The Zoölogical Club held regular meetings on the afternoons of Fridays, at which twenty-one original papers were presented and about thirty other papers were reviewed. The subjects to be presented were, as usual, announced in advance in the calendar of the University Gazette.

## CONTRIBUTIONS FROM THE ZOÖLOGICAL LABORATORY FROM AUGUST 1, 1906, TO JULY 31, 1907.

180. PARKER, G. H., AND METCALF, C. R. — The reactions of earthworms to salts: a study in protoplasmic stimulation as a basis of interpreting the sense of taste. *Amer. Jour. of Physiol.*, September, 1906, vol. 17, pp. 55–74.

181. WOODWORTH, C. W. — The wing veins of insects. *Univ. California Publ., Agr. Exp. Sta., Tech. Bull. — Entomology*, September [October], 1906, vol. 1, pp. 1–152.

182. MAST, S. O. — Light reactions in lower organisms. I. Stentor coeruleus. *Jour. of Exp. Zoöl.*, September, 1906, vol. 3, pp. 359–399.

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183. PARKER, G. H. — The influence of light and heat on the movement of the melanophore pigment, especially in lizards. *Jour. of Exp. Zoöl.*, September, 1906, vol. 3, pp. 401–414.

184. LARRABEE, A. P. — The optic chiasma of teleosts: a study of inheritance. *Proc. Amer. Acad. Arts and Sci.*, October, 1906, vol. 42, pp. 215–231.

185. COLE, L. J. — An experimental study of the image-forming powers of various types of eyes. *Proc. Amer. Acad. Arts and Sci.*, January, 1907, vol. 42, pp. 333–417.

186. ESTERLY, C. O. — The reactions of cyclops to light and gravity. *Amer. Jour. of Physiol.*, February, 1907, vol. 18, pp. 47–57.

187. MARK, E. L. — An electric wax-cutter for use in reconstructions. *Proc. Amer. Acad. Arts and Sci.*, March, 1907, vol. 42, pp. 627–636.

188. MACCURDY, H., AND CASTLE, W. E. — Selection and cross breeding in relation to the inheritance of coat-pigment and coat-patterns in rats and guinea-pigs. *Publ.* 70 *Carnegie Inst. Washington*, May, 1907, 150 pp., 2 pls.

189. RAND, H. W. — The functions of the spiracle of the skate. *Amer. Nat.*, May, 1907, vol. 41, pp. 287–302.

190. MARK, E. L., AND COPELAND, M. — Maturation stages in the spermatogenesis of Vespa maculata Linn. *Proc. Amer. Acad. Arts and Sci.*, June, 1907, vol. 43, pp. 69–74.

E. L. MARK, *Director.*

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# DEPARTMENT OF GEOLOGY AND GEOGRAPHY.

To the President of the University: —

Sir, — In the year 1906–07 there were 315 enrolments of students who passed the examinations in the courses in this Department. Of these enrolments, compared with the previous year, there was an increase of 40 from students in Harvard College, and a decrease of 106 from the Lawrence Scientific School, a change in attendance on courses presumably in part due to the relinquishment of the programmes of the latter institution. In the previous year 186 Harvard College students were enrolled; in 1906–07, 188 regular and 38 special students in Harvard College elected courses in Geology. Three graduate students took elementary courses; 11 took courses in the intermediate group; and 5 took courses primarily intended for them. Of the total selections by graduate students 17 were enrolled in the School of Arts and Sciences and 2 in that of Applied Science.

The Committee of the Department consisted as last year of Professors Davis, Wolff, H. L. Smyth, Assistant Professors Jackson, Ward, and Woodworth. The other members of the Department were Dr. G. R. Mansfield, Instructor in Geology, Mr. E. J. Saunders, Assistant in Courses *A* and *B*, Messrs. J. W. Eggleston, F. H. Lahee, and F. H. Sawyer, Assistants in Course 4, and Mr. H. E. Merwin, Assistant in Course 6.

The principal increment in the resources of the Department for the year arises from its sharing with the Division of Geology in the benefits of the Shaler Memorial Fund. It is probable that the income of the fund will be applied in 1908 to the support of an expedition to Brazil for the purpose of investigating the nature of the Permo-Carboniferous conglomerates of that country and, if the money suffices, to carry on geological researches in Patagonia and the Andes.

Through the generosity of certain members of the Visiting Committee, the Department has been able to order for installation in the Geological Section of the Museum a 100 kilogram Bosch-Omori seismograph. This instrument, constructed by Messrs. J. and A. Bosch, of Strassburg, Germany, is designed to register all movements of the earth near or distant. It magnifies horizontal oscillations one hundred times, and by this means it is hoped to obtain satis-

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factory records of many of the smaller earthquake shocks which originate in New England and adjacent regions.

By an arrangement with Professor Wolff in behalf of the Department of Mineralogy and Petrography and by means of a grant from the Corporation, the Department has had for three fifths of his time the services of an expert laboratory aid and custodian of teaching materials, Mr. George Marsh Flint.

The Geological Conference was maintained during the year. Twenty-seven "papers" were presented by instructors, students, and former members of the University.

By means of a grant of $250 from its unrestricted fees and the use of fees received for the course from students the Department was able to send a field party to Montana. This party, under the guidance of Dr. Mansfield, fitted out at Bozeman on the 2d of July and carried on an examination of the Bridger range, and later with Professor Wolff a study of the Crazy Mountains, for purposes of geological instruction. Ten Harvard students took this course.

As a matter of record it should be noted that the Department of Mining and Metallurgy, which began under the auspices of this Department and later formed a successful department in the Division, was this year constituted into an independent Division. As a reminder of the former relations of the two Departments we still retain the administration of the instruction in economic geology, given in the laboratories of the Mining Department, and the field course in geology for mining students is conducted in our laboratory.

The demand for graduate students to take scientific positions in the United States Geological Survey and to act as teachers of geology and physical geography in other institutions of learning was greater at the close of the year than we could supply. In the case of candidates fitting themselves for the government service, it is now highly desirable that young men should continue their geological studies until they have obtained the doctorate before taking the civil service examinations, and in the case of many colleges and universities the doctorate is a prerequisite for obtaining a teaching position with the prospect of promotion to a professorship. Many meritorious young men lack the means to maintain themselves in meeting the raised standards of preparation for entrance upon official positions. The various assistantships in the laboratory courses of the Department have thus become invaluable aids to some men. Many students appear to prefer such positions of paid service to money scholarships without the requirement of routine work, probably because the assistantships give the aspiring worker a professional standing and a prac-

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tical experience, features which are wanting in the conferring of academic distinction which the scholarship conveys.

The Sub-committees of the Department present the following reports: —

The Committee on the Gardner Collection of photographs (Messrs. Woodworth, Ward, and Johnson) report as follows:

| State of the Collection, July 1 | Photographs. | Slides. | Negatives. |
|---|---|---|---|
| Accessions since last report . . . . | 111 | 387 | 0 |
| Unidentified views on hand . . . . | 253 | 30 | 0 |
| Duplicates on hand . . . . . | 144 | 51 | 0 |
| Broken . . . . . | 0 | 1 | 0 |
| Condemned . . . . . | 0 | 0 | 0 |
| Last accession number . . . . . | 5812 | 5128 | 0 |
| Number now in collection . . . . | 5730 | 5442 | 1236 |

The accessions during the year include a set of 52 lantern slides from negatives made by Mr. Ellsworth Huntington on his journeys in Central Asia, and a set of remarkable photographs of water-spouts; some views of the 1906 eruption of Vesuvius taken by Mr. E. J. Saunders. The collection of slides having outgrown the cases previously constructed, a large case on a quite different plan has been built with a capacity for holding 13,550 standard American slides, 10,000 of which may be placed in the top of the case so as to be readily accessible. Dr. Mansfield gave a part of his time during the year to the cataloguing and care of the collection. Hereafter this work will be done by Mr. Flint.

The Committee on the Geological Museum (Messrs. Woodworth, Jackson, and Wolff) report that Mr. R. W. Sayles has been appointed Assistant in charge of the exhibition collections by the Faculty of the Museum of Comparative Zoölogy; a few purchases and additions of materials by gift have been made. The Museum is indebted to Professor W. O. Crosby of the Massachusetts Institute of Technology for the gift of a suite of rocks and fossils, the latter illustrating methods of fossilization. Specimens have also been received from Professor Palache. The gift of a collection of coral reef and phosphate rock from Ocean or Banaba Island, lat. 52° S., long. 169° 53′ E., Pacific Ocean, sent by Mr. Andrew F. Hall of that island, is gratefully acknowledged.

The Committee on the Josiah Dwight Whitney Scholarship (Professors Davis, Wolff, and Woodworth) recommended in June, 1907,

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that a scholarship of $200 be awarded to Mr. Frederick Henry Lahee, of Cambridge, Massachusetts, a student in Harvard College, for defraying his travelling expenses in Course S2 in Montana in the summer of 1907.

The annexed abstracts of the reports of the instructors set forth the condition of the several laboratories.

Professor Davis, Sturgis-Hooper Professor of Geology, reports that the addition of Assistant Professor D. W. Johnson to the departmental staff has made it possible to transfer the course on the Physiography of the United States (Geology 6) to his charge, leaving Professor Davis for the past year to give the advanced course in Physiography (Geology 20*a*) which has been conducted on the same plan as heretofore, except that a larger amount of time than usual has been given to individual conferences. The topics treated were: The Italian Riviera and the cliffs of Normandy, by Mr. E. J. Saunders, who had visited those typical coasts during a summer journey abroad; the Wind-river range of Wyoming, by Professor E. G. Woodruff, who had studied these mountains the previous summer in connection with work for the United States Geological Survey; the Physiography of the New York Central and the Pennsylvania railroad routes from New York to Chicago, by Mr. A. S. Cobb, who made a trip along the two lines, with numerous stops on the way, in connection with his study of their economic relations; the features of central England treated as a belted coastal plain, and of central Sweden treated as a district of faulted blocks, once base-levelled and now redissected, by Mr. W. N. Johnstone; the state and national boundaries of the United States, by Mr. A. T. French; the relation of irrigation to physiography, by Mr. J. H. Giles; and the physiographic factors that are significant as plant controls, by Mr. H. E. Merwin. Several of the theses in which the results of these studies were presented at the close of the year were well advanced; yet, as has usually been the case, it appears practically impossible for a student who gives no more than a quarter of his time to topics such as those stated above, to complete an essay ready for publication within the academic year. Professor Davis believes that it would be more profitable if half, or more than half, of the student's time were given to this course, and if the completion of an essay suitable for publication, creditable alike to the student and to the department, were made a requirement.

In association with the advanced course on Physiography, he held many conferences with Mr. Ellsworth Huntington, who, as Hooper Fellow, was writing an account of his recent travels in Central Asia,

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and discussing the records of subrecent changes of climate and their effect on human history.

Two afternoon lectures were given on the preparation of geological diagrams, as a contribution to instruction in technique, with which most of our students have insufficient acquaintance.

During the absence of Professor J. H. Wright, Dean of the Graduate School of Arts and Sciences, Professor Davis served as Acting Dean.

The New England Intercollegiate Geological Excursion being now well established as an annual autumnal field reunion of professors and advanced students of geology in our schools and colleges, a similar reunion of teachers and students of geography was initiated in the spring, as a means of bringing about further improvements in geographical teaching. A day's meeting, with morning and afternoon sessions, was held in Cambridge, with the decision to meet again in coming years.

The example of the Medical School in offering free Sunday afternoon lectures on scientific subjects as a means of increasing the relation of the School to the public, seemed to Professor Davis worthy of imitation by other departments of the University; and hence, with the consent of the Director of the University Museum to make the experiment, Professor Davis secured the coöperation of several members of the Museum staff in announcing a series of Sunday afternoon lectures in the Geological Lecture room. Lectures were given by Professors Goodale, Davis, and Wolff, Assistant Professor Johnson, and Dr. Tozzer. These lectures were well attended and excited many favorable comments on the part of those present. Professor Davis trusts that a similar series may be announced for the coming winter.

Much time was given in the spring and summer to the preparation of a series of Practical Exercises in Physical Geography, for use in schools. There has been increasing need of such exercises for a number of years past, in order to give a more disciplinary quality to the study; a quality which it sadly lacks to-day, if one may judge by the very disappointing results of our admission examinations in Physiography. A serious difficulty was encountered in the preparation of the ideal diagrams of typical land forms, on which a number of the exercises are based. No professional artist could be found who combined a sufficient knowledge of the subject with a trained delicacy of handiwork, and as a result Professor Davis had to prepare all the drawings himself, with what success remains to be seen.

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At the end of the summer Professor Davis went to England to attend the Centenary Celebration of the Geological Society of London and took advantage of the journey to see something of the North Wales and the Lake District as subdued mountains of pronounced glacial erosion, and of Devonshire-Cornwall, as uplands of normal dissection. The contrasts of the glaciated and non-glaciated areas were in the highest degree instructive.

Professor R. T. Jackson reports that Geology 11 was taken by 4 students; Geology 15 by 3 students.

The teaching collections are in good condition, and have been materially increased and improved by the following specimens selected and purchased by Professor Jackson: from Dr. F. Krantz, 41 lots; from R. F. Damon, 65 lots; from James Lomax, 78 microscopic slides; also from the Boston Society of Natural History, 70 specimens.

In the April recess a party of instructors and students visited Yorktown, Virginia, and secured an excellent representation from the rich fossil beds of that locality.

Professor Ward reports that the decrease in the number of students in the elementary course in Meteorology (Geology *B*), which was stated in last year's Report to be directly traceable to the assignment of the lectures to a late afternoon hour, has resulted, as was inevitable, in a falling off in the attendance of students upon the intermediate courses in Meteorology and Climatology. It does not appear wise, in the light of this experience, to continue to give the lectures in the elementary course at 3.30 P.M., and the Department has therefore voted that they shall hereafter come in the morning, as formerly. The students' meteorological observatory, on the roof of the Geological Section of the Museum, has added greatly to the interest and the value of the work done in Geology *B*. A considerable number of photographic enlargements, and of new weather maps, the latter enlarged for lecture purposes and illustrating special weather types, has been added to the teaching collection. Special attention has been paid to securing photographs and lantern slides of meteorological phenomena of recent occurrence. The collection of slides for use in the courses in Meteorology and Climatology is now well supplied. During the year two investigations carried out by students in the course Geology 20*e* (Advanced Climatology) have been published, as follows: "Mean Monthly and Annual Relative Humidity Charts of the United States," by Kenneth S. Johnson, '07, in the Report

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of the South African Association for the Advancement of Science, 1906, 161–168; "Fog on the Newfoundland Banks," by C. T. Brodrick, '07, in the Monthly Weather Review, Vol. 35, 1907, 76–78. Professor Ward has completed the manuscript of his new book, "Climate," for The Science Series.

Professor Woodworth reports that with Professors Davis and Wolff he gave the lectures to the class in Geology 4, the laboratory and field work of which was carried on, under his guidance, by Messrs. Eggleston, Lahee, and F. H. Sawyer. It is felt by the instructors and the students in this course that the field parties should be split up into smaller groups. For some years these field parties have included 32 students, too many for the effective instruction which one man can give. All the available force which we have been able to command has been devoted to this work. Were the number of students reduced to 10, as is now the case in Course 5, a great gain would be made. To accomplish this reduction would require an increase in the number of assistants in Geology 4 during October and November from two men to six. It is probable that temporary field aids drawn from the graduate and other advanced students in geology could be provided for this work at a cost of $140. Course 5, in the elements of historical geology, was given for the second time, with the assistance of Mr. Eggleston and the additional aid of Dr. Mansfield and Mr. Lahee in the field. The field localities chosen for this course lie as far away as Attleboro and Worcester, requiring an additional expenditure for transportation about equal to the fee of the course, but we believe the instructive quality of the localities amply repays the expenditure. Course 8 was given, as last year, with the aid of Dr. Mansfield in the field work. Course 16 was repeated as in former years, without personally guided field excursions. While this method of conducting field work is better for advanced students of a decided geological aptitude, it is doubtless true that many students who elect this course do not obtain that knowledge of the subject which they would have were they personally attended by an instructor in the field. One student in Course 20c completed the mapping of the felsites and basic flows south of North Attleboro, and a paper embodying a considerable advance in our knowledge of these subjects has been prepared for publication.

The teaching collection has been enriched by gifts of rocks from Tennessee by Mr. Chester W. Washburn; of rocks from the upper Mississippi Valley by Mr. W. N. Johnstone, '09; of rocks from Colorado by Mr. J. W. Eggleston, and several minor accessions.

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During the April recess Professor Woodworth conducted a party from Course 5 to the Yorktown section in Virginia.

An additional storage case was built and placed in the hall. A reading desk composed of olivine basalt in the form of a *metate*, or native Mexican corn mill, with its hand roll, or *metapile*, was brought from Mexico by Professor Woodworth and installed in the Geological Laboratory. An enlarged photograph of Professor Shaler by Pach has been placed in the Geological Laboratory. Several instructors from other nniversities have, during the year, visited this laboratory and indicated their intention of embodying certain features in laboratories about to be constructed, as at Princeton, Columbus, Ohio, etc.

Professor Woodworth continued his connection with the New York State Geological Survey and has completed a map and report on the pleistocene geology of the Schuylerville quadrangle, including the major part of the battlefield of Saratoga. In July, 1907, he took part in conducting members of Section E of the American Association for the Advancement of Science to various points of interest between Covey Hill, Canada, and the Ausable Chasm.

Mr. Eggleston spent five days in September, 1906, in an examination of the syenite at Cuttingsville, Vt.

Professor Johnson reports that the summer of 1906 was spent in conducting a geological excursion through portions of New Mexico, Arizona, and Utah. The excursion was supported in part by an allotment of funds from Harvard University and a similar grant from the Massachusetts Institute of Technology. After making an examination for the Atchison, Topeka, and Santa Fé Railway Company of the underground water resources along a portion of their line in New Mexico, and studying the volcanic features of the Mount Taylor district in the same territory, the party proceeded to Prescott, Arizona. From this point a wagon trip of fifteen hundred miles was made through the Grand Canyon district of Arizona and the Basin regions of Arizona and Utah, the excursion terminating at Salt Lake City.

During the winter considerable time was devoted to the preparation of articles based on the summer's work. The following subjects were treated: the volcanic necks of the Mount Taylor region, the faults and folds of the Grand Canyon district, recent volcanic activity in the San Francisco mountains, and physiographic features along the western margin of the High Plateaus of Utah. Reports on the volcanic necks of the Mount Taylor region were presented at a meeting of the American Academy of Arts and Sciences in Boston

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and at the winter meeting of the Geological Society of America in New York; also reports on the texture of topography and its origin, and on the origin of beach cusps (read by title), at the meeting of the Association of American Geographers in New York. Several public lectures on the western excursion were given during the year.

Professor Johnson continued to give instruction in the Geological Department of the Massachusetts Institute of Technology throughout the year. He resigned from the Institute on September 1, 1907. In Harvard University he gave two courses, Geology A and Geology 6. The plan of instruction in these courses remained practically unchanged, except that in Geology 6 a system of conferences with individual students, at stated intervals, was instituted.

The Geographical Laboratory equipment has been augumented by the purchase of ten new desks for use by the students. The laboratory exercises in Geology A have been revised, new exercises added, and a large number of new maps purchased.

An elementary summer course in the Physiography of the Lands was given by Professor Johnson, assisted by Mr. E. J. Saunders, to a class of ten persons. In connection with this work several excursions were made, including one to the Berkshire Valley and another to the White Mountains.

Dr. Mansfield reports that the work in Course 22 consisted in the first half-year of the geological mapping of an area, and in the second half-year of special field problems. The course Mining 28, a half-course in Field Geology and Geological Surveying, given to students in the Division of Mining and Metallurgy, was completed by eight students, whose field work comprised the preparation of a geological map of the Middlesex Fells on a scale of 500 feet to the inch, which map, together with field notes, reports, and specimens, has been filed in the laboratory of advanced geology. The working facilities of this laboratory have been improved by the building of a storage case and by the addition of numerous specimens to the working collection of rocks illustrating the geology of the Metropolitan District. Dr. Mansfield spent the first five weeks of the summer in Montana, in the Bridger Range and in the Crazy Mountains, as instructor in charge of Geology S2, and later acted as assistant to Professor Wolff in the same region.

Dr. Mansfield's thesis on Conglomerates has been published as a Bulletin of the Museum, and a separate paper of a didactic character has been prepared for publication in the Journal of Geology. Considerable time was given during the year to the laboratory and field work in elementary courses.

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The following is a list of publications which have appeared since the last report: —

1. The Mountains of Southernmost Africa. By W. M. DAVIS. *Bull. Amer. Geogr. Soc.*, XXXVIII, October, 1906, pp. 593–623.

2. The Physical Factor in General Geography. By W. M. DAVIS. *Educational Bimonthly*, I, 1906, pp. 112–123.

3. Professor Shaler and the Lawrence Scientific School. By W. M. DAVIS. *Harvard Eng. Journ.*, 1906, pp. 129–138.

4. Biographical Memoir of George Perkins Marsh. 1881–82. By W. M. DAVIS. *Biogr. Mem. Nat. Acad. Sci.*, 1906, pp. 71–80; portrait.

5. [Review of] Wright's "Scientific Confirmations of Old Testament History." By W. M. DAVIS. *Christian Register*, March 14, 1907; *Boston Transcript*, March 16, 1907.

6. The Place of Coastal Plains in Systematic Physiography. By W. M. DAVIS. *Journ. Geogr.*, VI, 1907, pp. 8–15.

7. The Terraces of the Maryland Coastal Plain. Review of "Pliocene and Pleistocene." Maryland Geographical Survey. By W. M. DAVIS. *Science*, May 3, 1907, New Ser., XXV, pp. 701–707.

8. Report on a Geological Excursion through New Mexico, Arizona, and Utah, Summer of 1906. By D. W. JOHNSON. *Technology Quart.*, XIX, December, 1906, pp. 408–415.

9. Drainage Modifications in the Tallulah District. By D. W. JOHNSON. *Proc. Bost. Soc. Nat. Hist.*, XXXIII, February, 1907, pp. 211–248, pls. 27–28.

10. River Capture in the Tallulah District, Georgia. By D. W. JOHNSON. *Science*, March 15, 1907, New Ser., XXV, pp. 428–432. Separate, 10 pp.

11. A Recent Volcano in the San Francisco Mountain Region, Arizona. By D. W. JOHNSON. *Bull. Geogr. Soc. Phil.*, V, July, 1907, pp. 6–11, 2 pls.

12. Volcanic Necks of the Mount Taylor Region, New Mexico. By D. W. JOHNSON. *Bull. Geol. Soc. Amer.*, XVIII, July, 1907, pp. 303–324, pls. 25–30.

13. Reviews in *Amer. Nat. Science and Bull. Amer. Geogr. Soc.* By D. W. JOHNSON.

14. The Origin and Structure of the Roxbury Conglomerate. By G. R. MANSFIELD. *Bull. Mus. Comp. Zoöl.*, XLIX, November, 1906, pp. 89–271, 7 pls.

15. The Characteristics of the Zones. By R. DEC. WARD. I. The Tropics. *Journ. Geogr.*, V, September, 1906, pp. 302–319. II. The

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Temperate Zones. *Loc. cit.*, October, pp. 337–353; November, pp. 375–405. III. The Polar Zones. *Loc. cit.*, December, pp. 433–450.

16. Changes of Climate. By R. DEC. WARD. *Popular Sci. Monthly*, LXIX, November, 1906, pp. 459–470.

17. Les Changements du Climat. By R. DEC. WARD. *Ciel et Terre*, XXVII, January, 1907, pp. 559–567; February, pp. 617–631.

18. Notes and Reviews in *Science* and in the *Bull. Amer. Geogr. Soc.* By R. DEC. WARD.

19. A 1671 Version of Nicolaus Steno's De Solido Intra Solidum Naturaliter Contento, by H. O. By J. B. WOODWORTH. *Science*, May 10, 1907, New Ser., XXV, pp. 738–739. Separate, 3 pp.

20. Postglacial Faults in Eastern New York. By J. B. WOODWORTH. *Bull. 107 N. Y. State Museum*, 1907, pp. 5–28.

J. B. WOODWORTH, *Chairman.*

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The following is a list of publications which have appeared since the last report: —

1. The Mountains of Southernmost Africa. By W. M. DAVIS. *Bull. Amer. Geogr. Soc.*, XXXVIII, October, 1906, pp. 593–623.

2. The Physical Factor in General Geography. By W. M. DAVIS. *Educational Bimonthly*, I, 1906, pp. 112–123.

3. Professor Shaler and the Lawrence Scientific School. By W. M. DAVIS. *Harvard Eng. Journ.*, 1906, pp. 129–138.

4. Biographical Memoir of George Perkins Marsh. 1881–82. By W. M. DAVIS. *Biogr. Mem. Nat. Acad. Sci.*, 1906, pp. 71–80; portrait.

5. [Review of] Wright's "Scientific Confirmations of Old Testament History." By W. M. DAVIS. *Christian Register*, March 14, 1907; *Boston Transcript*, March 16, 1907.

6. The Place of Coastal Plains in Systematic Physiography. By W. M. DAVIS. *Journ. Geogr.*, VI, 1907, pp. 8–15.

7. The Terraces of the Maryland Coastal Plain. Review of "Pliocene and Pleistocene." Maryland Geographical Survey. By W. M. DAVIS. *Science*, May 3, 1907, New Ser., XXV, pp. 701–707.

8. Report on a Geological Excursion through New Mexico, Arizona, and Utah, Summer of 1906. By D. W. JOHNSON. *Technology Quart.*, XIX, December, 1906, pp. 408–415.

9. Drainage Modifications in the Tallulah District. By D. W. JOHNSON. *Proc. Bost. Soc. Nat. Hist.*, XXXIII, February, 1907, pp. 211–248, pls. 27–28.

10. River Capture in the Tallulah District, Georgia. By D. W. JOHNSON. *Science*, March 15, 1907, New Ser., XXV, pp. 428–432. Separate, 10 pp.

11. A Recent Volcano in the San Francisco Mountain Region, Arizona. By D. W. JOHNSON. *Bull. Geogr. Soc. Phil.*, V, July, 1907, pp. 6–11, 2 pls.

12. Volcanic Necks of the Mount Taylor Region, New Mexico. By D. W. JOHNSON. *Bull. Geol. Soc. Amer.*, XVIII, July, 1907, pp. 303–324, pls. 25–30.

13. Reviews in *Amer. Nat. Science and Bull. Amer. Geogr. Soc.* By D. W. JOHNSON.

14. The Origin and Structure of the Roxbury Conglomerate. By G. R. MANSFIELD. *Bull. Mus. Comp. Zoöl.*, XLIX, November, 1906, pp. 89–271, 7 pls.

15. The Characteristics of the Zones. By R. DEC. WARD. I. The Tropics. *Journ. Geogr.*, V, September, 1906, pp. 302–319. II. The

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Temperate Zones. *Loc. cit.*, October, pp. 337–353; November, pp. 375–405. III. The Polar Zones. *Loc. cit.*, December, pp. 433–450.

16. Changes of Climate. By R. DeC. WARD. *Popular Sci. Monthly*, LXIX, November, 1906, pp. 459–470.

17. Les Changements du Climat. By R. DeC. WARD. *Ciel et Terre*, XXVII, January, 1907, pp. 559–567; February, pp. 617–631.

18. Notes and Reviews in *Science* and in the *Bull. Amer. Geogr. Soc.* By R. DeC. WARD.

19. A 1671 Version of Nicolaus Steno's De Solido Intra Solidum Naturaliter Contento, by H. O. By J. B. WOODWORTH. *Science*, May 10, 1907, New Ser., XXV, pp. 738–739. Separate, 3 pp.

20. Postglacial Faults in Eastern New York. By J. B. WOODWORTH. *Bull. 107 N. Y. State Museum*, 1907, pp. 5–28.

J. B. WOODWORTH, *Chairman*.

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# THE DIVISION OF MINING AND METALLURGY.

To the President of the University:—

Sir, — At the beginning of the academic year 1906–07 twenty students were enrolled in the programme of Mining and Metallurgy in the Lawrence Scientific School. The table below gives the corresponding numbers, as well as the total registration in the Scientific School and the percentage of mining students, for each year since 1897.

| | '97–98 | '98–99 | '99–00 | '00–01 | '01–02 | '02–03 | '03–04 | '04–05 | '05–06 | '06–07 |
|---|---|---|---|---|---|---|---|---|---|---|
| Students in Mining and Metallurgy . | 17 | 19 | 30 | 42 | 67 | 73 | 68 | 67 | 68 | 20 |
| Students in the L. S. S. . . . . | 410 | 415 | 495 | 507 | 549 | 584 | 548 | 530 | 504 | 204 |
| Per cent. . . . . | 4.1 | 4.6 | 6.1 | 8.3 | 12.2 | 12.5 | 12.6 | 12.6 | 13.4 | 9.8 |

In addition to the men in the Lawrence Scientific School three mining students were enrolled at the beginning of the year in the Graduate School of Applied Science and one in the Graduate School of Arts and Sciences. Before the end of the year the number in the Graduate School of Applied Science had increased to six.

The great falling off in the number of mining students in the Scientific School, as well as in the total number of students, was due to the registration of new students, both regular and special, in Harvard College and to the transfer to Harvard College of students already in the School. This movement was the inevitable result of the establishment of the degree of S.B. in Harvard College; and since it was necessary to the speedy development of the new Graduate School of Applied Science, the whole weight of our influence was thrown in its favor. It is to be understood therefore that these figures do not mean any material falling off in the total number of men studying Mining. Statistics collected by the Mining Club, a students' organization, indicate that the number of such men was about the same as in the preceding year.

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## Occupations and Earnings of Graduates.

Mining is a basic industry like Agriculture. But unlike Agriculture it cannot be carried on, except in rare cases, by individual effort. It requires associations of men and capital, complex organizations with officers of various grades, and a minute subdivision and specialization of effort. This Division is endeavoring to train men for places in this highly organized industry. How are we succeeding?

In the long run our success must be measured by the success of our graduates, — that is to say, by the readiness with which they obtain a foot-hold in the mining industry, and the work they do in it. The time which has elapsed since the course was established has been too short to enable us to judge fairly as to the position which our graduates are likely to attain. Nevertheless the results of an inquiry carried on last spring have a bearing on this question and may be stated here.

The first man to take the degree of S.B. in Mining and Metallurgy in the Lawrence Scientific School, after the beginning of our work in 1895, was graduated in 1897. In the ten years which have since elapsed a considerable number of men have taken the degree and have subsequently engaged in mining work. It seemed desirable and valuable at the end of this first ten-year period to find out, if possible, what these men had accomplished since graduation. The investigation was accordingly undertaken by writing a personal letter to every man who had been out of college at least one year, — that is to say, to graduates of all classes down to 1905 inclusive.

Down to 1906 the number of men who had received the degree of S.B. in Mining and Metallurgy was 38, as follows: 1897, 1; 1898, 0; 1899, 2; 1900, 2; 1901, 3; 1902, 7; 1903, 12; 1904, 4; 1905, 7. Besides these 38 men five others have completed the work of the Mining programme and have taken higher degrees in the Graduate School, — A.M. or S.M., but not the S.B. They are counted as graduates of the Division. Of the class of 1905, three men continued their studies at Harvard during the year 1905–06; also five graduates are known never to have engaged in Mining work, and one man is dead. After the addition and deduction respectively of these names, 34 graduates are left who are known to have been engaged in Mining or Metallurgy, and to them the inquiry was confined. Information has been received from 26 men, or about 70 per cent. of the whole number. Of the eight men not heard from, one is reputed to be very successful, and two others are believed to have

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done as well as the average. The occupations of the 26 men are as follows: —

| | | | |
|---|---|---|---|
| Mine Superintendent | 11 | Metallurgist | 2 |
| Mining Engineer | 6 | Teacher of Metallurgy | 1 |
| Examining Engineer | 3 | Metallurgical Supplies | 1 |
| Mining Geologist | 2 | | |
| | | Total | 26 |

Geographically the men are located as follows: —

| | | | |
|---|---|---|---|
| Middle Atlantic States | 6 | Southern States | 1 |
| Lake Superior region | 3 | Central America | 1 |
| Western States | 8 | Cuba | 1 |
| Mexico | 5 | Corea | 1 |

The earnings of the men reporting are as follows: —

| | |
|---|---|
| Average for the first year after graduation | $958 |
| General average for the current year | 2390 |
| Earning over $5000 a year | 2 men |
| " $4000–$5000 a year | 2 " |
| " 3000– 4000 " | 2 " |
| " 2500– 3000 " | 3 " |
| " 2000– 2500 " | 8 " |
| " 1500– 2000 " | 6 " |
| " 1000– 1500 " | 3 " |

The results shown in these tables are encouraging as far as they go. They show that nearly ninety per cent. of our graduates are continuing in the work for which they were trained, and that a fair proportion of them have already reached executive positions of responsibility. As regards earnings, when it is considered that the average age of these men is about twenty-seven years (the oldest being not yet thirty-four), and that they have been at work on the average only a little more than four years, it is clear they have done well, — probably decidedly better than the average young doctor or lawyer, and unquestionably better than the average young graduate in other branches of Engineering.

## New Courses.

Four new courses were added to our programme last year, and Course 5 was lengthened from a half-course to a full course. The new courses are as follows: —

Course 16, a half-course in the first half-year, is intended as an introduction to Mining and Metallurgy. In this course Professor Peters proposes to set forth the fundamental principles on which the practice of Mining and Metallurgy is based, the history of these arts,

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and their relation to the development of civilization. This course is treated with as few technical details as possible, the object being to make it of such general interest that it may profitably be taken by students of Economics, as well as by men who intend to follow a business career. It is hoped also that this course will prove of value to the Division by making its work better known to the general body of students.

Courses 21, 25, and 27 are half-courses in special subjects, and are particularly designed to meet the needs of graduate students, and to open the way for greater freedom of election in graduate work. Course 21 by Professor Raymer deals with Mining Machinery. Course 25 by Professor Smyth deals with Magnetic Methods of Prospecting, and Course 27 by Professor Sauveur deals with Blast Furnaces and their Products. It is expected that some of these courses at least will be offered only in alternate years.

No changes in the number of assistants or in the personnel of the teaching force have been made during the past year.

### Lectures, etc.

The useful gift made by the Visiting Committee to this Division in 1906, which was mentioned in my last report, has enabled us greatly to extend the system of short courses of lectures on special topics by experts. In December, 1906, Mr. Robert Van Arsdale Norris of Wilkes-Barre was appointed Lecturer on Coal Mining and gave ten lectures on this subject in January. Mr. Norris has had much experience in the mining and marketing of coal, and his very interesting lectures supplemented in a most useful way the routine work of the Division. It is hoped that his connection with us may be continued and its scope enlarged.

Mr. Woolsey McAlpine Johnson gave in March two valuable series of three lectures each on Present Practice in Electro-Metallurgy and Concentration and Smelting of Zinc Ores.

In March, Mr. S. T. Nelson, of the Sullivan Machinery Company, gave two lectures on Hoisting Engines, and Mr. T. L. Dee, also of the Sullivan Machinery Company, gave one lecture on Diamond Drilling. The long experience of these gentlemen and their broad and practical knowledge of their subjects made their lectures especially acceptable to our students.

The instructors in the Division continued to engage, as far as their duty to the University permitted, in professional work.

Mr. E. E. White made trips to the Sterling Salt Mine in Central New York and to the lead district of Southeastern Missouri. Mr.

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H. M. Boylston visited metallurgical establishments in Pittsburg and Buffalo. Dr. George R. Mansfield had charge of one of the summer field courses in Geology in Montana and later assisted Professor J. E. Wolff in geological field work in the Crazy Mountains. Professor C. H. White was engaged during the year in perfecting his colorimeter. He spent part of the summer in the recently developed mining districts of Nevada. Professor Sauveur continued his consulting work, and also has been engaged in writing a book on the *Metallurgy of Iron and Steel*, which he plans to make the first of a series to be published under the general title of *The Iron and Steel Encyclopedia*. Professor Peters has continued his consulting work. His book on the *Principles of Copper Smelting* appeared in April. Professor Smyth has engaged in consulting work. He made several trips to the Lake Superior iron region where also, as in preceding years, he spent the summer.

As usual, the Division has actively interested itself in finding places for its graduates, not only of the current year, but of preceding years as well. Men who are out of a job or who wish to better themselves naturally write to us to see if we know of a vacant position, and those who know of vacant positions write to us for men to fill them. In this way our men are learning that our interest in them and our possibility of being useful to them do not cease at graduation. Thus for our own graduates we do much the same work that the Appointments Office is doing for the College at large. During the year positions (including work for the summer) were found in mines and metallurgical establishments for eleven men at salaries ranging from $3,600 down. In addition three men were appointed to assistantships on the recommendation of the Division.

The Department was made a Division during this year.

## Needs of the Division.

The chief needs of the Division were fully set forth in my last report. These needs still exist and may briefly be stated again as follows: —

1. Enlargement of the Rotch Building in order to provide an additional lecture room, laboratories, library, reading-room, and museum. The additions and changes as planned will cost approximately $30,000.

2. A small mine, not too far from Cambridge, which might be equipped and run during the summer as a mining laboratory. It is believed that a suitable property could be secured and equipped for a small sum.

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3. A summer course in Metallurgy, which at the beginning should consist of a tour of inspection of metallurgical establishments.

4. Additional instruction in Mining Machinery, Electro-Metallurgy, and Mining Geology.

5. A permanent assistant in Sulphide-Metallurgy.

## Publications.

The following publications by members of the Division have appeared during the last academic year: —

The Origin and Structure of the Roxbury Conglomerate. G. R. Mansfield. *Bull. Mus. Comp. Zoöl. Harvard College*, XLIX, Geol. Series VIII, No. 4, 1906.

Characteristics of Various Types of Conglomerates. G. R. Mansfield. *Journal of Geology*, XV, No. 6, 1907.

Principles of Copper Smelting. E. D. Peters. 612 pp. Hill Publishing Company, New York.

Metallography Applied to Foundry Work. Albert Sauveur. *The Foundry*, April, 1907.

The Microstructure of Wrought Iron. Albert Sauveur. *Electrochemical and Metallurgical Industry*, April, 1907.

Diagram of the Processes and Products of Iron and Steel Manufactures. Albert Sauveur. *Iron Trade Review*, May, 1907.

Magnetic Observations in Geological and Economic Work. H. L. Smyth. *Economic Geology*, Vol. II, No. 4, June, 1907.

H. L. SMYTH, *Chairman.*

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# MINERALOGICAL MUSEUM AND LABORATORIES OF MINERALOGY AND PETROGRAPHY.

To the President of the University: —

Sir, — The usual courses of instruction were given and were well attended. Mr. Ralph W. Richards, assistant in the Department for the last two years, was appointed to the U. S. Geological Survey, and Mr. H. E. Merwin will be assistant for the coming year. The need of a permanent mechanical and clerical assistant for the Museum and laboratories, explained in the last report, has been met by the appointment of Mr. G. R. Flint, whose services are shared with the Department of Geology.

The instrumental equipment has been improved, through the generosity of a friend, by the addition of two lathes, at a cost of $600, for sawing and grinding sections of minerals and rocks. One of these holds the object to be cut against the edge of the diamond-charged saw in a set of jaws which can be revolved in three different planes through measured arcs, permitting the cutting of oriented sections at predetermined angles.

The collection of minerals has received many accessions, including several rare and valuable specimens purchased in part by gifts of money from anonymous friends. One of these, which will delight visitors to the exhibition rooms, is a great mass of deep purple amethyst crystals, three feet long by two wide by one deep, presenting a curved surface containing some five hundred large and perfect crystals. It was sent to Germany from Brazil for cutting purposes and rescued from that fate by a prominent mineral dealer who held it for our Museum. Professor T. Wada of Tokyo sent (partly in exchange) a set of interesting Japanese minerals, which were supplemented by others collected in Japan for the Museum by Mr. G. Frazar.

Mr. J. W. Eggleston, a graduate student in Geology, has been engaged in the study of the syenite stock of Cuttingsville, Vt. The Curator spent most of last summer in the Crazy Mountains of Montana, engaged in reviewing the geology and petrography in preparation for a long deferred monograph. He was assisted by Mr. H. E. Merwin and for some time by Dr. G. R. Mansfield, who conducted

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the Summer School of Geology there in the earlier season. The two parties worked together for three weeks. Several new features were observed, including a small glacier in the recesses of one of the cañons. A large number of specimens were collected and about three hundred photographs taken.

JOHN E. WOLFF, *Curator.*

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# THE PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY.

To the President of the University: —

Sir, — In preparing this, the forty-first report on the Peabody Museum, I am deeply impressed by the changes that have taken place during two score years, and the consequent broadening of the scope of the Museum. When George Peabody, in 1866, gave $150,000 for the purpose of establishing a museum of American archaeology and ethnology and a professorship for the teaching of these subjects, an important and far-reaching foundation was laid. But those were days of small beginnings, and archaeology and ethnology were hardly ranked as subjects of scientific research. A museum which should have for its object the collection and preservation of material relating to the present Indian tribes and their predecessors in America was then supposed to have narrow and well-defined limits. Just as Harvard College has grown into a university, so has this museum developed from its original limited object into a museum and school of anthropology. It has become the Anthropological Section of the University Museum and an essential factor in the Division of Anthropology under the Faculty of Arts and Sciences. Thus, while the Peabody Museum, as conceived by its founder, should be and must be the principal part of the museum for all time, it cannot be limited to its original object. Its large collections from various parts of the world, together with the broad scope of the plan of instruction in the Division of Anthropology, illustrated by these collections, have made it distinctly a Museum of General Anthropology.

The increase of the collections through the activity of the Museum in many lines of research, particularly in explorations in North, Central, and South America; the large collections coming to it through the personal explorations and interest of graduates and friends of the University; the publication of the Papers and Memoirs of the Museum; the growth of its library into one of unusual importance for anthropological research; and the constant use made of the Museum and its library by teachers and students, all call for a more adequate endowment, and for the immediate completion of the south wing of the University Museum building.

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This addition to the building would furnish the needed room for placing on exhibition the many thousand valuable specimens now in storage, and would enable me to perfect the plan for the arrangement of the Museum so that it shall be an exponent of the life and history of man from the primitive state through savagery and barbarism to the beginnings of civilization. It would also furnish the additional space required for the Anthropological Library; for a lecture room to accommodate students in the several courses now given in the Division; for the laboratory used by graduates who are carrying on researches; for work-rooms needed in the preparation and cataloguing of specimens, and for the administrative work of the institution. All these are imperative needs that our present building cannot supply. When the second section of this building was completed it made one half of the south wing of the University Museum. There is now remaining a space of one hundred feet reserved for the extension of the Peabody Museum, between the blank wall of this wing and that of the southern corner of the main structure of the University Museum. The completion of this wing would finish the University Museum building as planned by Agassiz fifty years ago. How much would be done for anthropology in America if this great store-house of invaluable collections, which future generations can never duplicate, could thus secure the space assigned to it for present and future expansion. What an appropriate memorial it would be at this time, one hundred years after the birth of Agassiz, if some friend or friends of the University would furnish the means for carrying to completion this grand scheme which Agassiz conceived and for which he worked so successfully during his life!

Notwithstanding the crowded state of the halls and cases, several interesting exhibits have been added during the year. These were made possible by the kindness of Mr. Augustus Hemenway who furnished the means for building a large new case to take the place of the platform in the hall formerly used in part as a lecture hall. This additional case provided room for the exhibition of many objects relating to the Indian tribes of North America, and afforded the Assistant Curator an opportunity to make a more systematic arrangement in the North American Indian Hall and Gallery. Several small cases have been added to these rooms in order to place on exhibition a number of lay figures showing Indian costumes, and several groups illustrating the customs of certain Indian tribes as exemplified by their habitations and domestic life. These lay figures and miniature groups of habitations have been made under the personal supervision of Mr. Willoughby. They are an important

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feature in an ethnological exhibit, and it is my hope that we shall in time be able to illustrate the distinct costumes and habitations of all the native peoples, particularly of the North American Indian tribes.

The exhibition of several new collections and of others taken out of storage has been accomplished by eliminating from several of the cases such specimens as could be spared without detracting from the importance of the exhibit as a whole. The specimens taken from the cases have been placed in drawers where they are readily accessible.

The limitation of exhibits is a matter that every curator of a museum has to contend with. Many discussions on this subject have taken place during the past few years and several papers have been published relating to the principles involved in the arrangement of public museums. These discussions have been based on the obligations of a museum to the public which supports it, thus the principle necessarily differs from that of a university museum, in which the primary object is to furnish the means for comparative study, by an arrangement of synthetic, systematic, and geographical exhibits. This arrangement makes the collections of importance to students as well as of educational interest to the general public.

In the Anthropological Section, the geographical and ethnographical system has been followed, so that the student has certain naturally limited groups to study and compare, both in archaeology and ethnology. These groups are made as complete as possible in order to present as a whole the archaeology of a special region, and the customs, art, and costumes of each tribe or people represented. In this way all that it is possible to glean of the life history of man from specimens of his handiwork and from exemplification of his achievements is shown in the various exhibits. The story of his past and of his condition in savagery, in barbarism, and in the beginnings of civilization, is illustrated. In the somatological collections the opportunity is afforded for a comparative study of the physical characteristics of the various races.

An exhibit of exceptional interest and importance, secured through the generosity of Miss Mary L. Ware, is that of the reduced copies of the mural paintings of the Temple of the Tigers at Chichen Itza, Yucatan. These paintings, showing the frescoes as they exist on the four sides of the upper chamber of this temple, have been framed and suspended over one of the long table cases in the Central American and Mexican Hall. They are fine illustrations of the pictorial art of the ancient people who built the huge stone structures of Yucatan. For these accurate copies of the old frescoes archaeolo-

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gists are deeply indebted to Miss Adela C. Breton, who made several visits to Yucatan for the purpose of making facsimiles of the originals.

In addition to her gifts mentioned in former reports, Miss Breton has given to the Museum two of her colored drawings of portions of the bas-relief of the lower chamber of the Temple of the Tigers. She has also generously colored several plates in our copy of Maudslay's work on the ruins of Chichen Itza, from the copies she made of the colors still remaining on a number of the sculptures. These colored pictures furnish, to those who have not visited the ancient buildings of Yucatan, much that is new in relation to the customs and life of the people who reached the highest stage of art in North America in prehistoric time.

The largest of several important collections received during the year is the gift of Mr. Thomas Barbour (A.B. 1906). It comprises articles of dress and personal ornament, weapons, household utensils, figure heads of canoes, charms, effigy idols and other objects collected by Mr. and Mrs. Barbour from the tribes of Dutch New Guinea during their expedition of 1906–07. The principal localities represented are Doreh (Manokwari), the region made famous by the collections in natural history of Wallace and d'Albertis; Djamna, in the Tanah Merah; and Toebadi, at Humboldt Bay. These localities are on the northern coast of New Guinea. Collections were also obtained from Jendee, on Roon Island; from Pom, Wooi, and Ansus, on Jappen Island; and from Meos-boendi, on Wiak Island of the Schouten group. These islands are in Geelvink Bay near the northwestern end of New Guinea. Mr. Barbour took several hundred photographs of the natives and of their houses and villages, and he has generously given a set of these photographs to the Museum. Although the Museum possesses a fairly good collection from the Papuan Gulf district (British New Guinea), the region visited by Mr. Barbour was practically unrepresented in our ethnological exhibits. A collection consisting of weapons, baskets, mats, boxes, and fire implements from the Alfuros of Halmahera (Gilolo), was brought to us by Mr. Barbour as a gift from Capt. G. J. J. deJong, the military commandant of Halmahera.

Mr. Lewis H. Farlow, who during the past five years has given many valuable specimens illustrating the ethnology of our Indian tribes, has continued his contributions and has sent to the Museum a large collection from the Hupa and Yurok tribes of the Trinity and Klamath rivers of northern California. Other recent gifts from Mr. Farlow are twelve rare baskets from the Chilcotin Indians

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of British Columbia, an Athapascan tribe whose culture in some respects approaches that of the Salishan people of Fraser and Thompson rivers; three very old Tlingit baskets found in the family of a Hudson Bay Company trader; an unusually fine basket from the Inyo-Kern region of California; baskets and other objects from the Karok, Pit River, Pomo, Panumit, Moquelumnan, Mission, and other Indians of California; a collection of very old Navajo baskets, showing the different designs, from Arizona and New Mexico; ceremonial and domestic articles from the Kwakiutl tribes of British Columbia; and a Pomo ceremonial robe of bear-skin, with accessories, from California. These collections, with the other material received in former years from Mr. Farlow, have been installed in the hall and gallery containing the exhibits relating to the tribes of North America.

Dr. L. C. Jones of Malden has contributed to the Museum many specimens from various countries. This year his gifts of special importance are: Finely wrought ceremonial axes of iron from the province of Kassai, Congo Free State; a drum, a native harp and a model of a canoe from the province of Uganda; and a Warree gaming board from Mendeland, Africa; ornaments from New Guinea; ancient fish-hooks from the Pacific Islands; Hupa woman's hat; a Makah Indian basket; pottery and a clay effigy from the pueblo of Cochiti, New Mexico. He has also given stone implements from New Brunswick, Maine, Pennsylvania, North Carolina, Mississippi, and New Mexico.

Mr. Clarence B. Moore, who always remembers the Museum when on his expeditions, has sent to us two pottery vessels, having incised decorations, from Moundville, Alabama; also a shell pick or hoe, mounted on a wooden handle to show the probable method of hafting similar implements, from the southwest coast of Florida.

The Museum of Comparative Zoölogy has transferred to this Museum twenty-two masks in plaster of the natives of Africa, the Pacific Islands, and the Malay Archipelago.

From the Egyptian Exploration Society, through its Secretary, Mrs. Cornelius Stevenson, we have received forty-five specimens of Egyptian pottery from Ballas, Nagada, Hu, and Gurob.

Dr. Charles Peabody has given a series of chipped flints from the tertiary deposit at Otta, Portugal, — examples of what some archaeologists consider to be the work of man; specimens representing the supposed eolithic culture from environs of Mons, Belgium; others from the palaeolithic sites of La Moustier, Solutre, and La Madeleine, France; animal bones and chipped flints from neolithic sites

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in France, Denmark, and Switzerland. These specimens were collected by Dr. Peabody during his recent trip to Europe.

Other additions to the collections received as gifts are: From Professor Arlo Bates, two crania and other portions of skeletons from a shell-heap at Frenchman's Bay, and from another at West Goldsborough, Me.; Mr. Samuel D. Hannah, stone pestle from Barnstable County, Mass.; Mr. A. M. McCulloch, an old dugout canoe of Indian type found about fifty years ago in the mud of a pond in Otis, Mass.; Professor J. B. Woodworth, grooved stone sinker from Martha's Vineyard, and pottery heads from Teotihuacan, Mexico; Mr. Owen Bryant, a representative collection of stone implements and utensils from the shores and islands of Notre Dame Bay, Newfoundland; Mr. J. W. Hastings, pottery cup from Zimatlan, Oaxaca, Mexico; Mr. R. G. Fuller, an unusually fine ceremonial adze from the Hervey Islands, obtained in Mexico during the Mexican war, also a paddle from the coast of Guinea, Africa; Mr. H. A. Wright, a pottery cup from an Indian grave on Long Hill, Springfield, Mass.; Mr. K. F. Brill, chipped knives from Maryland; Mr. Irwin Hayden, a chipped implement from Winthrop, Mass.; Mr. Eben F. Putnam, a hammer-stone, chipped knives, and fragment of a soapstone pot from Indian village site, Wellesley Farms, Mass.; and stone sinkers from a shell-mound, Ellis Landing, San Francisco Bay, Cal.; Dr. G. W. Nash, a large Iroquois pottery jar found while excavating a cellar at Hurley, N.Y.; Mrs. F. W. Putnam, belt made by a Navajo woman; Miss C. A. Benneson, examples of early printing from Japan, China, and India; Dr. W. McM. Woodworth, two native belts worn by men in the Marshall Islands; Mr. C. C. Willoughby, a wallet of native flax from New Zealand; Rev. Père Pacifique, a quill-ornamented box of the Micmac Indians; Baron Atashi Kitagaki, Kyoto, Japan, through Mr. J. H. Gardiner, two stone axes from the island of Hokkaido, Japan; Señor Alvaro Gil de Almeida, a bow and seven poisoned arrows and a notched bamboo arrow from the Canamarys Indians of the Upper Purus river, Brazil; Professor R. Pumpelly, wheat from an Egyptian tomb; Mr. T. Maler, chipped flint implements from Tikal and Naranjó, Guatemala; Dr. A. M. Tozzer, ancient pottery mould for making terra-cotta images from Chiapas, Mexico; Dr. J. C. Phillips, several crania, pottery vessels, stone and bone implements, pendants, and beads of shell and turquoise and other stone, shell bracelets and other personal ornaments from mounds near Ramos, State of Chihuahua, Mexico; Mrs. E. R. Emerson, an interesting lot of stone implements from an Indian burial-place on the western bank of the Kennebec river, at

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Waterville, Me.; Mr. H. S. Forbes, charms and a silver image made and worn by the Igorots of the Philippine Islands; Mr. S. G. Morley, potsherds from the ancient pueblos of the Rio Grande Valley, New Mexico.

Our collection of photographs has been enriched by the following gifts, in addition to the large series from Mr. Barbour: —

From Dr. Alexander Agassiz, thirteen photographs of American Indians; Mr. J. M. Wulfing, photographs of six remarkable objects in repoussé copper found in Dunklin County, Mo.; Dr. Roland B. Dixon, fifty-seven photographs of the ruins and peoples of India and other sections of Southern Asia; Dr. A. C. Hadden (as an exchange), fifty-four lantern slides of the natives of New Guinea.

In 1882, 105 oil portraits of Indians were received from the heirs of E. P. Tileston and Amor Hollingsworth. These are the portraits which were used largely as the originals of the plates in the folio volumes of McKenney and Hall published in 1836. They are mostly copies by Henry Inman of the original paintings by C. B. King which were destroyed by fire in the Smithsonian Institution in 1865. At the time of the gift several other portraits of this series were known to be in Boston houses in the keeping of members of the two families. Recently Mrs. Cornelius Dexter has kindly presented one of these portraits to the Museum through the hands of Mr. Horace E. Ware.

We have received an interesting painting from the Trustees of the Boston Athenaeum, through the suggestion of Miss Irene Weir, a descendant of the artist. The painting is signed Robert W. Weir, West Point, 1839, and was purchased by the Athenaeum in 1860. At the right is a soldier in Spanish costume who seems to be pleading for the Indian whose figure forms the centre of interest in the picture.

The income of the Huntington-Frothingham-Wolcott Fund has been used for purchasing specimens illustrating the arts and customs of the Eskimo of Cape Vancouver, the Iroquois, Ojibwa, Apache, Pima and Zuñi Indians of North America, the Surinam tribes of South America, and the Igorot and Negrito of the Philippine Islands; and for shields and clubs from Africa. It has also been used for making a miniature habitation group of the Plains tribes, and for life-size lay figures of a Northwest Coast man and a Nootka and a Hupa woman for the display of costumes; and for the models of the figures in the Siouan group. A portion of the income was also applied to defray in part the expenses of the expedition to the Nez Percé country under the direction of Dr. Dixon.

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The income of the H. C. Warren Exploration Fund was used for the further exploration of the ancient cemetery site on the Ferris estate in Ohio bequeathed to the Museum by the late Miss Phoebe Ferris.

In addition to the income of these two funds, so important to the work of the Museum, we have had the annual gifts of $500 from Mr. Clarence B. Moore, $25 from Mrs. N. E. Baylies, and $100 from an anonymous friend. These gifts have been used for the exploration in the Delaware valley and on the Ferris estate. We also received an anonymous gift of $365 for the Nez Percé exploration; another anonymous gift of $25 for making diagrams needed in the lectures to the students; and $100 from Professor H. W. Haynes for the purchase of special books needed in the Museum Library.

The income of the Susan D. Warren Fund has been applied to the cost of the cases in the Indian Gallery.

The most extensive ethnological expedition ever started by the Museum is the South American Expedition which is under the patronage of a recent graduate of the University, as stated in the report of last year. This expedition has received additional support from another recent graduate who generously adds $50 a month toward the expenses. The field work is under the charge of Dr. W. C. Farabee. The party consisting of Dr. Farabee, accompanied by Mrs. Farabee, Mr. de Milhau, Mr. Hastings, and Dr. Horr, reached the headquarters in Arequipa, Peru, early in February last. From this place the gentlemen made several trips, on one of which they witnessed an Aymara festival. On March 8, they left Arequipa and crossed the Andes to the Tombopata river, where they arrived about the middle of August. They returned to Arequipa by a different route early in September, when Mr. Hastings returned to Cambridge. The other three members started on a trip to Cuzco. This preliminary trip of six months in that little-known region furnished many opportunities to study several Indian tribes and to make important ethnological and other scientific collections. Mr. de Milhau is to return in January, and Dr. Farabee and Dr. Horr are to make another trip into the interior, on their return from the Cuzco valley. Everywhere the expedition has been well received both by government officials and by individuals. The officers of the Inca Mining Company have been untiring in giving assistance and in furnishing transportation over their extensive routes both on land and by river boats.

In Central America, Mr. Teobert Maler has been engaged in preparing his reports on his explorations under the Committee of Central American Research. We have received his reports of the

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explorations at the ruined cities of Altar de Sacrificios, Seibal, Ilsimté-Sácluk, and Cankuen. These have been translated from the German, and are now in process of publication. They will be followed by his descriptions of other ruins which he visited during his later expeditions. This series of reports will make another large volume of the Museum Memoirs containing many instructive plates of the structures, sculptures, and hieroglyphic inscriptions.

Mr. E. H. Thompson has continued his researches at Chichen Itza in Yucatan and has sent to the Museum a number of moulds and photographs of the sculptures and hieroglyphic inscriptions that he discovered in the ancient ruins. His report on this work when completed will form another Museum Memoir. This research has been carried on under the direction of the Committee of Central American Research.

Under the immediate guidance of Dr. R. B. Dixon, Mr. H. J. Spinden, Austin Teaching Fellow in Anthropology, and Mr. R. R. Hellman (A.B. 1906) made an expedition to the Nez Percé country for linguistic, general ethnological and archaeological research. Unfortunately, Mr. Hellman was disabled by sickness. Mr. Spinden was successful in his researches and in his study of the Nez Percé language. He brought back important linguistic material for study, including an extensive Nez Percé vocabulary with illustrations of the grammatical construction of the language, and twenty Nez Percé myths, some of which are in the native text. He secured a collection of rare ethnological objects, including a necklace, made of deer hoofs, which formerly belonged to one of the Indian guides of Lewis and Clark. He also made a small archaeological collection.

Mr. V. Stefansson, who had been an Assistant in the Division, joined the Anglo-American Polar Expedition to the western arctic regions, in the spring of 1906, as Ethnologist of the Expedition. When starting on this expedition Mr. Stefansson was supplied with a small fund with the understanding that he should collect such objects as he could. In the winter of 1906–07 he was able to make a study of the language and customs of the Eskimo. He explored Eskimo sites on Herschel Island near the mouth of the Mackenzie River, on Flaxman Island on the arctic coast of Alaska, and on one of the Jones Islands at the mouth of the Colville River.

Mr. R. E. Merwin, Graduate Student and Hemenway Fellow for 1907–08, — assisted for part of the time by Mr. Irwin Hayden, also Graduate Student and Hemenway Fellow for 1907–08, — has given his time from June to November to the exploration of the ancient cemetery and village site on the Ferris estate in Madisonville, Ohio.

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During this exploration many objects of importance have been discovered which will aid in the elucidation of this interesting site where so much work has been done under the auspices of the Museum since 1881. Mr. Merwin has taken the study of this site, with the large collection of specimens found there, for the subject of his thesis for the degree of Ph.D. Next summer he will finish the exploration of this land which was bequeathed to the Museum for that purpose. He is thus having exceptionally good opportunities for field work and for increasing the already rich material for his thesis.

The exploration of the glacial deposits and Indian sites in the vicinity of Trenton, New Jersey, has been continued by Mr. Ernest Volk during the past year. Several interesting discoveries have been made, and Mr. Volk will continue the work as long as the weather permits.

Mr. S. G. Morley (A.B. 1907), a student in the Division, spent February and March, 1907, in Yucatan visiting the ruins there, preparatory to entering that field of archaeology as a life work. In addition to the well known groups of Chichen Itza, Labna, and Kabah, he visited some of the smaller and less generally known sites: Sayil, notable for a large three-story structure containing over one hundred rooms, Xcoralche, Kuihuic and Acanceh. At Acanceh, — in a long room at the summit of a pyramid which was uncovered about two years ago during the process of removing stone to build a wall around the village plaza, — some very fine sculptures in stucco were discovered. This medium is rarely used in Yucatan. The figures were of animals and exhibited great strength of execution. They seemed, however, to resemble much more closely the Nahuatl sculptures than any known Maya forms. Mr. Morley's work in the field consisted in planning, mapping, drawing, describing and photographing the different ruins visited by him. He also visited the ruins of Mitta and Monte Alban. At Monte Alban there is a stela which may show Maya influence. Of this he made several photographs, which, with others from Yucatan, he has given to the Museum.

During the summer vacation Mr. Morley, with Mr. A. V. Kidder and Mr. J. G. Fletcher, students in the University, accompanied the expedition of the American Institute of Archaeology as students under the guidance of Mr. E. L. Hewett. During this expedition Mr. Hewett entrusted Messrs. Morley and Kidder with important work in connection with the exploration and mapping of the ruined pueblos in the McElmo and Mesa Verde regions in southwestern

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Colorado. This work of the Archaeological Institute is under the direction of the American Committee with Mr. Hewett as Director of Explorations. These explorations will be continued and will furnish excellent opportunities for field research to our advanced students in anthropology.

In December, 1906, the Museum issued No. 2 of Vol. IV of its Papers under the title of Commentary on the Maya Manuscript of the Royal Public Library of Dresden (known as the Dresden Codex) by Ernst Förstemann: a translation from the German. This important aid to the study of American Hieroglyphs is thus made readily available to students in this country. The translation, made under the direction of Mr. Charles P. Bowditch, by Miss Selma Wesselhoeft and Miss A. M. Parker, was published through the Central American Fund. Dr. Förstemann was greatly pleased that his paper was to be published in English, and it is a sad incident that although the distinguished author was able to revise the translation, he died before receiving the first copy of the published work.

At a meeting of the Visiting Committee, appointed by the Overseers, held in the Peabody Museum in December last, Dr. R. B. Dixon, in his capacity of Librarian of the Museum, presented a statement of the condition and needs of the Museum Library. He drew attention to the fact that, through exchange with our Museum publications and by gifts of patrons, our library has now become a very important one, especially in regard to its complete sets of the serial publications of the anthropological societies and museums in various parts of the world. Since the library has no endowment, Dr. Dixon took this opportunity to make an appeal for aid in carrying on the administrative work, for purchasing special books, for binding the serials to save them from destruction in the constant use by the students, and for putting in another double row of shelves to relieve the present crowded condition. The Museum is certainly in need of a small annual income for library purposes. Under Dr. Dixon's supervision the library has been rearranged, so far as space will permit, and the shelf list is being prepared. 115 volumes and 711 pamphlets have been received during the year, principally by exchange with the Museum publications. The library now contains 3472 volumes and 2435 pamphlets on all branches of anthropology.

During the month of August Dr. Charles Peabody officially represented the Peabody Museum at the Prehistoric Congress of France at Autun and also at the International Reunion of Anthropologists at Cologne.

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In the Harvard Summer School of 1907 Dr. A. M. Tozzer gave a course in Anthropology. The lectures were well attended and were illustrated by the collections in the Peabody Museum. Dr. Tozzer has prepared a Syllabus of Anthropology 1, which will also be a valuable aid to all beginners in the study of anthropology.

Through the substantial aid of a friend of the Museum and Division, a Fellowship in Central American Research has been established in the Division of Anthropology for the year 1907–08. The terms of the foundation require that the candidate shall be nominated by the Faculty of the Peabody Museum and also that "The candidate must be a student in the Graduate School of Arts and Sciences who is pursuing the study of Central American Archaeology and Ethnology. The incumbent will be required to pursue certain lines of research which seem advisable to the officers of the Division of Anthropology. The stipend is six hundred dollars." This fellowship has been awarded to Mr. S. G. Morley (A.B. 1907), who has been making a special study of the Maya hieroglyphs.

Mr. H. J. Spinden has been reappointed Austin Teaching Fellow in Anthropology for the year 1907–08; Mr. R. G. Fuller is Assistant in Anthropology and Winthrop Scholar; and Mr. R. E. Merwin and Mr. Irwin Hayden are Hemenway Fellows, for 1907–08.

In addition to the courses of special research for advanced students which are carried on in the laboratories of the Museum under the direction of the Peabody Professor, Assistant Professor Dixon and Dr. Tozzer, three full courses and three half-courses, given by Assistant Professor Dixon, and Drs. Tozzer and Peabody, are open to undergraduates during the year. Anthropology 1 is also given at Radcliffe College. Dr. W. C. Farabee has leave of absence as Field Director of the South American Expedition.

F. W. PUTNAM,
*Peabody Professor and Curator of the Museum.*

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## THE SEMITIC MUSEUM.

To the President of the University: —

Sir, — During the year 1906–07 the Museum has received the following groups of objects: —

1. Twenty-four Greek papyri and fragments from the Egypt Exploration Fund. They were found at Oxyrhynchus and el-Hibeh, and have all been published in *The Oxyrhynchus Papyri*, Parts ii–iv, by Grenfell and Hunt, or in *The Hibeh Papyri*, Part i, by the same editors. They include contracts, letters, petitions, extracts from Homer and Demosthenes, poetic fragments, and a fragment of a non-canonical gospel, and range in date from the third century B.C. to the third century A.D.

2. From Babylonia a fragmentary dispatch from Hammurabi to Siniddinam, a duck-shaped stone weight with an inscription almost worn away by long use, a large fragment of a statuette in stone, probably representing a god or a king, and an interesting stone seal which is said to have been found at Beisan in Palestine.

3. Objects illustrating modern life in Palestine, as musical instruments, household utensils, Bedouin articles, models of houses and tools, manuscripts (Arabic, Hebrew, and Samaritan), etc.

4. Articles illustrating ancient Palestine, as pottery, bronze and iron weapons, coins, scarabs, glass and alabaster vases, etc.

During the year Mr. Jacob H. Schiff made a gift of $10,000 to the Museum, which he subsequently made available for exploration, as explained below. At his suggestion and with the approval of the Museum Committee the President and Fellows appropriated $1000 of Museum money toward the purchase of a house in Jerusalem for the American School of Oriental Study and Research.

The report for 1904–05 gives an account of the gift of $5,000 by Mr. Schiff for preliminary expenses, of his further offer of $10,000 a year for five years for exploration in Palestine, and of the choice of Professor George A. Reisner as Director of the expedition. The offer was understood to be provisional, and liable to be withdrawn if the permit to dig were not secured within eighteen months. Fortified with letters of the highest authority, Professor Reisner went to Constantinople in the autumn of 1905, and made formal application

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for permission to dig in the ruins of Samaria. He received the cordial assistance of the American Ambassador, His Excellency John M. Leishman, and of the Director of the Imperial Ottoman Museum, His Excellency Hamdy Bey. After doing all that seemed possible at the time, Professor Reisner returned to his work in Egypt, hoping that the permit might be granted in the course of the winter. The Turkish law relating to antiquities was at the time undergoing revision, and the hope was not realized. The new law went into effect in April, 1906. In the summer of that year Professor Reisner was requested by the Turkish authorities to present a plan of the site to be excavated, and he went to Samaria to gather materials for this plan. Not long thereafter, at the request of the Harvard "Committee on Exploration in the Orient," he returned from Egypt to Constantinople, to re-enforce by his presence, if possible, the efforts in behalf of the permit. The delay at that time seemed to proceed from the local authorities in Palestine, who had not yet replied to the official question sent from Constantinople asking whether there was any reason for refusing the permit to excavate Samaria. There is reason to suppose that this reply was sent from Beirut to Constantinople in the month of October, 1906.

But the delays were so long that various members of the Committee on the Museum had begun to despair of ever getting the permit. Professor Reisner was instructed to stop expenses, and he accordingly returned to Egypt, but did not withdraw the application at Constantinople. In the spring of 1907 he was invited by the Egyptian government to accept for three years an important position in the archaeological exploration of the region which is to be flooded by the addition to be made in the height of the dam at Assuan. In the uncertainty hanging over the question of exploring Samaria, with the consent of the President of the University, he accepted the post offered him, and entered on his task in September, 1907.

In the following month the permit to dig at Samaria was finally granted. Although the permit comes a year later than the time limit set by Mr. Schiff, he has renewed his offer to provide for the expense on the terms described in the report for 1904–05. The law requires the work of exploration to begin within three months. But at the request of the American Embassy permission has been granted to postpone the work till April 21, 1908. In the rainy months, December to March, little digging can be done in Palestine. In answer to inquiry Professor Reisner has telegraphed that he could devote April and May to the work at Samaria. It is hoped, therefore, that the work of exploration may be inaugurated by him during

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the spring of 1908. This narrative shows the situation at the present time (December 19, 1907).

During the past five years much excavation has been done in Palestine by the English, the Austrians, and the Germans. The sites explored, Gezer, Taanach, Megiddo and Jericho, have yielded a vast amount of material, chiefly of the early or Canaanite period. Samaria, long the capital of the Kingdom of Israel, doubtless buries material of the Hebrew period, and perhaps even Assyrian letters and dispatches relating to Samaria while the place was the seat of an Assyrian governor. The exploration of Samaria is a large undertaking, but it promises so much that our plans have excited lively interest among the friends of Palestinian research.

For the year 1906–07 Professor George F. Moore served as acting Curator of the Museum. The Curator spent the year in Palestine as annual Director of the American School of Oriental Study and Research. Among the six students in that school two had studied in the Semitic Department of Harvard University.

DAVID G. LYON, *Curator.*

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# THE FOGG ART MUSEUM.

To the President of the University: —

Sir, — I have the honor to present the following report on the Fogg Art Museum for the year 1906–07.

Our accessions are: A painting attributed to Benozzo Gozzoli, sent us by Mr. Edward W. Forbes, '95; a copy by John Ruskin of a portion of the picture by Paolo Veronese in the gallery of Turin, representing the subject of Solomon and the Queen of Sheba, given by Professor C. E. Norton; a water color drawing by J. M. W. Turner, purchased out of the income of the Prichard fund; seventeen lead pencil drawings by Turner, for the purchase of which Mr. James Loeb, '88, made us the generous gift of $1000; a marble bust portrait of Professor Norton by V. D. Brenner, a gift from Mr. James Loeb; and a bronze medal in commemoration of President Eliot and the University, given by Mr. F. A. Delano, '85.

The accessions to the print collections are: to the Randall Collection, by purchase from the income of the Randall fund, the Copper-Plate Magazine, 5 vol., containing engravings by William and John Walker, James Fittler, William Ellis, James Heath, James Storer, and others.

There have been 670 additions to the collection of photographs, including illustrations of Italian architecture and sculpture, works by the English Pre-Raphaelites, and modern French painting. The third year publication of the Arundel Club, containing 20 photogravures of Italian paintings, has also been received, and ten photographs of studies from nature, published in 1864 by the Editors of "The New Path."

To the collection of slides, 84 additions have been made, including illustrations of Greek sculpture and the discoveries at Delphi, mosaics in Ravenna, the Fonte Gaia in Siena, and Italian, English, Spanish, and French painting.

To the Museum library have been added 37 volumes, by gift, by purchase, and by transfer from the University Library. By gift from Professor C. E. Norton: Description of Ancient Terra Cottas in the British Museum; Description of Ancient Marbles in the British Museum. By purchase from the income of the Randall fund: the

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supplement to Singer's Lexicon. By purchase from the income of the Searle fund: Titian's Trionfo della fede, the Biblia Pauperum and Altdorfer's Landschaftsradierungen, publications of the Graphische Gesellschaft; Rembrandt's Radierungen, 1 vol., and Correggio, 1 vol., of the Klassiker der Kunst series; Singer and Strang, Etching, Engraving, and other Methods of Printing Pictures; Catalogue des portraits de la Bibliothèque Nationale, vol. i–v; A. L. A. Portrait Index; Lippmann, Engraving and Etching; also his Wood Engraving in Italy; Thausing, Albert Dürer, 2 vol.; Delaborde, Marc-Antoine Raimondi; Wussin, Jonas Suyderhoef; Haden, L'oeuvre gravé de Rembrandt.

The painting attributed to Benozzo Gozzoli is characteristic of his style, and is a well preserved panel in its original frame. It is an important addition to our already exceptionally fine series of original works of early Italian art. The lead pencil drawings by Turner belong, for the most part, to his strongest period, and are remarkable examples of expressive landscape delineation. They will be of great value in instruction.

The number of photographs catalogued was 1276, making the total number now catalogued 36,420. There are still uncatalogued about 2950, making the total number in the collection about 39,370.

The number of slides catalogued was 84, and the total number now in the collection is 3654.

A sculpture list by places and galleries, filling three volumes, and a brief list of carved ivories, have been prepared, and are found very useful. The photograph portrait list has also been much enlarged and somewhat revised.

During the summer, the annual reading of the photograph and slide catalogues was made, and every photograph was restored to its place or accounted for.

Photographs were lent 193 times to various members and departments of the University, to the Boston Museum of Fine Arts, to the Hartford (Conn.) Public Library, to several schools, and to persons outside the University. Slides have been lent 202 times to the Department of Architecture, to Radcliffe College, to the Cantabrigia Club, and to a few outsiders.

The number of visits to the photograph collection by persons using photographs for study was 813. Of these 644 were by members of the University, an increase of 20 per cent. on the number of last year. This is due in part to the resort to the collection by students of the Summer School, but it is also a result of an increase in the conference work of the courses in Fine Arts.

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The sum of $26.40 has been received from the sale of catalogues and photographs, and paid over to the Bursar. This sum is larger than that of any previous year.

Of the Randall Collection, 967 prints have been catalogued. A list was made of the engraved portraits in the print collections. It is complete for the Gray Collection, and for the Randall Collection as far as the latter is catalogued. The list represents about 2100 different persons and 2600 engraved plates. For the Museum Collection photographs to the number of 1067 have been mounted. For the Gray and Randall Collections 11 prints were mounted, and a considerable number of tracings, used in the conference work, were mounted for the Fine Arts Department. Photographs and engravings have been mounted, and other mechanical work has been done, for other departments of the University, and for a few outsiders, for which the sum of $87.39 has been received and paid over to the Bursar.

The number of visits to the collection of prints for purposes of study was 322. Of these 264 were by members of the University. The number of hours spent in showing prints was 245.

In the spring of 1907, the exhibition of line engravings after Turner, lent by Mr. Francis Bullard, '86, of Boston, after remaining open for a year, was closed, and replaced by an exhibition of English mezzotint engravings from our own print collections. These mezzotints are still on view in the Print Room.

For some time past we have been unable to make any additions to the collection of photographs on account of Custom House regulations of which we were formerly not aware. In procuring photographs it is impossible to make proper selections from catalogues, or to ascertain what we want, without having the photographs before us. We have therefore, hitherto, requested foreign dealers to send us their entire collections, or the more recent additions to these collections in cases where we have already had photographs from them, and from these we have made our selections, returning such as we have not required. These consignments have been addressed to the care of the Treasurer of the University, who, supposing them to be the property of the University, has made the oath required for their free entry. But on learning lately that the photographs were sent on approval, and not as the actual property of the University, he has informed us that he cannot any longer make the oath, and that he cannot at present find any way of bringing in photographs for examination. We are thus blocked in making additions to our collection,

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and requests for much needed consignments made last spring have had to be countermanded.

Increased embarrassment is felt as time goes on from the lack of resources for general Museum expenses. Valuable objects come to us through the generosity of friends of the University, which we are unable to make promptly accessible to students by providing suitable cases for their display. The fine series of lead pencil drawings by Turner, above mentioned, remains locked up on this account. We also need a fund for the purchase of desirable objects that are, from time to time, to be had. Some fine examples of the works of Early English water-colorists, for instance, such as would be of great value in instruction, were lately offered in London at very moderate prices, but we were unable to secure them.

As our collections grow, the need for additional space, and for good light, increases. If the Museum is to supply the growing needs of the teachers and students of the University some additions to the building must soon be provided.

CHARLES H. MOORE, *Director.*

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## THE GERMANIC MUSEUM.

To the President of the University: —

Sir, — The principal accessions to the Germanic Museum during the past year were the following: a cast of the bronze gates of Augsburg Cathedral (11th century), bought partly with money given by the German Department of Mt. Holyoke College, partly with the proceeds of a concert given by the German Singing Societies of Boston; a cast of the pulpit of the church of Wechselburg in Saxony (13th century), given by His Majesty, Friedrich August III, King of Saxony; a cast of the Crucifixion Group from the same church (13th century), bought by the Germanic Museum Association; a cast of the Tomb of Emperor Ludwig, the Bavarian, in the Church of Our Lady at Munich (about 1468), given by Mr. Henry W. Putnam of Boston; and a cast of Adam Kraft's relief of the Town-Weigher from the façade of the former Municipal Custom-House at Nuremberg (1497), given by the Municipal Government of the city of Nuremberg.

All these monuments are important additions to our collection of mediaeval German sculpture. The panels of the Augsburg Cathedral gates form a striking contrast to the somewhat earlier panels of the Hildesheim gates already in our possession. While the Hildesheim reliefs in their crude, but vigorous realism give evidence of a decidedly indigenous and original North German art in the eleventh century, the Augsburg reliefs show unmistakable influence of classic tradition. Their technique approaches the finely chiselled forms of the silversmith's work; the types represented in them betray affinity with types not uncommon in Byzantine and Italian ivory tablets. There are altogether thirty-five panels, each of them containing some symbolical or legendary representation of Christian doctrine.

The Wechselburg pulpit and Crucifixion Group are among the finest specimens of the fully developed Romanesque style of German sculpture in the early thirteenth century. Both pulpit and Crucifixion Group were originally part of the rood-screen separating the transept from the choir. In the reliefs of the pulpit — Christ as Judge of the World, the sacrifice of Isaac, and the healing of the

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Jews by the brazen serpent — it seems as though the artist was grappling with the problem of form. In the majestic figure of Christ himself, seated on his throne, surrounded by the symbols of the Evangelists, he has, indeed, attained perfection of form, classic solemnity, exalted repose. In the more animated scenes of the sacrifice of Isaac and the healing of the Jews, there is a curious contrast between grandeur and awkwardness, sweetness of feeling, and naïve naturalism. A similar contrast is found in the Crucifixion Group. The figures of John and Mary standing under the cross, and of Joseph of Arimathea holding out the cup to receive the blood of the Saviour, are remarkable for nobility of outline, depth of feeling, and measured beauty of expression. There is a fine sweep in the two angels on the cross beam, gentle sadness in the figure of Christ, and a mild tenderness in the attitude of God the Father appearing above. The symbolical figures, however, probably Pagandom and Jewdom, on which Mary and John are standing, are tortuous and forced.

The tomb of Emperor Ludwig in the Church of Our Lady at Munich is one of the finest sepulchral monuments of later Gothic art. It represents the Emperor enthroned on a richly ornamented dais, in his hands sceptre and globe, while two angels are holding a canopy over his head. Beneath this group, two princes, one of them in a long flowing mantle, the other in full armor with his heraldic lion at his side, are engaged in animated conversation. Equally lifelike and realistic is Adam Kraft's relief of the Nuremberg Town-Weigher. The Town-Weigher himself stands in the midst of the group, conscientiously noting the balancing of the beam of the scales. To the left, an attendant is in the act of adding another weight; while opposite to him the merchant whose bales of merchandise are about to have the duty settled upon them, puts his hand reluctantly into his purse. The whole composition presents an admirable and graphic scene from German burgher life in the fifteenth century.

It is a gratifying fact that the gifts here described have come from such diversified sources as Boston citizens and a New England Women's College on the one hand, a German prince and the government of a German city, following the example of the German Emperor, on the other. Nor have there been lacking other encouraging symptoms of continued interest in the Museum cause. As in former years, so this year also, Mr. Conried, until recently director of the German theatre in New York, showed his generous sympathy by giving a benefit performance for the Museum, the play chosen being Grillparzer's "Medea." The Emperor William Fund has

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received additional gifts, to the amount of $1,435, from the following persons: —

| | |
|---|---|
| Mr. F. von Benkendorff, Brooklyn, N. Y. . . | $50 |
| Mr. H. L. Clark, Philadelphia, Pa. . . . . | 100 |
| Mr. Albert Gehring, Cleveland, O. . . . . | 200 |
| Mr. Henry L. Higginson, Boston . . . . . | 1,000 |
| Mr. William L. Putnam, Boston . . . . . | 50 |
| Miss Elise Richards, Boston . . . . . | 10 |
| Mr. Moses Williams, Boston . . . . . | 25 |
| | $1,435 |

The whole fund amounts now to nearly $27,000. The demand for the Handbook of the Museum has been so great that the first edition is exhausted and a new and enlarged edition had to be undertaken. This edition will appear soon. The number of visitors to the Museum during the year having been more than 25,000 — an increase of over 1,000 persons over last year — the Corporation of Harvard University have decided to open the Museum on Saturdays also. On October 6, two hundred and fifty delegates of the National German-American Alliance, representing nearly every State of the Union, after holding their annual convention in New York, made a trip to Boston for the express purpose of visiting the Museum. They were received by President Eliot and Professor Francke, and through their president, Dr. Hexamer of Philadelphia, pledged their support of the Museum cause. And finally, the interest in the Museum has received a new and powerful stimulus through the presence among us during this winter of Professor Paul Clemen of the University of Bonn, this year's representative from Germany in the annual interchange of professors between Harvard and German universities. For not only does Professor Clemen hold in the Germanic Museum a seminary for advanced students on mediaeval German sculpture, but he has aroused by his eloquent and enlightening lectures intense and intelligent appreciation of contemporary German art among large numbers of cultivated persons, and has thus greatly contributed to the furthering of the ultimate purpose which the Museum is designed to accomplish, namely, to bring to view in a comprehensive manner the history of German culture.

I cannot close this report without repeating emphatically what I have tried to make clear in several of my former reports: the imperative and immediate necessity of a new and suitable Museum building. Much has been accomplished thus far. Indeed, it can be said without exaggeration that no university in the world has even attempted what has successfully been begun at Harvard University: the

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representation of the development of a modern nation through a historical display of its art. This undertaking has met with the readiest response and the most generous support from the German Emperor, various German Governments, German cities, and the German public. A collection of typical and representative works of art has been brought together such as no other university either in Europe or America possesses. Is it not clearly for Americans, and above all for Americans of German blood, to see to it that this priceless collection at last be worthily housed and that a possibility be given to put before American students a complete and truly historical conspectus of the artistic development of the Fatherland? Until there is assurance of a new building, the cost of which inclusive of its endowment should be about $300,000, our undertaking cannot be pursued any further. We cannot even ask for further gifts of objects, for we have no space left in which to place them. With a large and suitable building we should undoubtedly have a constant influx of gifts from Germany similar to those received thus far, and should therefore soon grow up to the proportions of a true museum of national culture. As it is, we are in the ignominious position of having to decline even the smallest objects that may be offered to us, or to store them away unused and unseen. This is an intolerable condition of things. Here is the opportunity for our fellow citizens of German origin to prove to the world that they do not leave their ideals at home when they leave the Fatherland, and here is a chance for all Americans to show their appreciation of what German culture has given to this country.

KUNO FRANCKE, *Curator.*

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## COLLECTION OF CLASSICAL ANTIQUITIES.

To the President of the University: —

Sir, — As Curator of Classical Antiquities, I have the honor to present the following report for the year 1906–07.

The Collection of Classical Antiquities in Sever 25 and 27 has grown slowly but steadily during the year, thus realizing the hope of its founder that his gift might serve as a nucleus around which there might gradually be brought together a mass of material illustrative of the life of the ancient Greeks and Romans. The principal accessions have been: A collection of 33 Roman inscriptions (including a section of inscribed lead pipe), purchased in Rome by Professor Clifford H. Moore, '89, with funds provided by the Corporation; 18 specimens of Roman work in bronze (including a small figure of a Lar, a candelabrum, two mirrors, a razor, five handles, and vessels of different sorts), parts of an iron bit, a model of a Pompeian lock and key, a model of the famous fibula from Praeneste with the earliest known Latin inscription, and a large piece of mosaic decorated with a comic mask, — all these purchased in Rome by Professor M. H. Morgan, '81, also with funds provided by the Corporation; 13 Roman lamps, 8 small Greek and Roman gems, 26 Greek and 12 Roman coins, a bronze key, a bronze statuette of Minerva, and 6 excellent specimens of Graeco-Phoenician glass vases, loaned by Mr. Oric Bates, '06; a large collection of coins (including 73 Greek, 162 Roman, and a few of later times), 12 late Greek vases, and 26 fragments of Roman glass, loaned by Mr. George Moriarty, '06; 36 fragments of votive terra-cottas, 4 stamped amphora handles, a stamped brick, and a small piece of mosaic, presented by Dr. A. S. Pease, '02; a bronze strigil from Aegina, presented by Professor A. A. Howard, '82; and a large Roman lamp, the gift of Mrs. Schuyler Van Rensselaer, of New York. Besides these accessions, there have also been placed on exhibition in Sever 27 specimens of the armor used in the performance of the "Agamemnon," and one of the chariots made for the play, the latter a gift of the Alpha Delta Phi Club to the Department of the Classics.

The Scott Collection of monuments relating to Julius Caesar, which, through the courtesy of the Department of Fine Arts, is

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exhibited in the Fogg Museum, has been increased during the year by several gifts from the founder. These include: 8 casts of life-size busts of Caesar in Rome and Mantua; a cast of a small bust and a very small head in Florence; a terra-cotta bust from Florence; some 60 casts of coins, medallions, etc.; and a considerable number of photographs of statues and busts. Some of these accessions have been placed on exhibition with the casts which made up the original gift, but most of the smaller objects and two of the busts cannot yet be exhibited, owing to lack of funds for the necessary pedestals and cases.

To the collection of slides in Harvard 1 some fifty additions have been made. Here also has been placed the second of the chariots made for the Greek Play, a gift of the Porcellian Club. One hundred and thirty-eight photographs purchased by Professor Morgan in Rome have been added to the collection of photographs in Sever 16.

A considerable part of the Curator's time has been devoted to preparing a catalogue of the various collections under his charge. The original Pfeiffer-Hartwell Collection is now almost completely catalogued, and in the course of the present year most of the objects in Sever 25 and 27 should be listed.

In many ways the Collection of Classical Antiquities has already proved its usefulness. The vases and other objects are constantly used as illustrative material in the courses in classical archaeology; the bronze utensils and the terra-cottas have been used in connection with the courses on the life of the Greeks and Romans; the Roman inscriptions have been made the basis of practical exercises by students of Roman epigraphy. The greatest need at present is more and better specimens of the minor products of Greek art, such as vases and small bronzes, and money to provide for the better exhibition of the objects already acquired and of future accessions.

GEORGE H. CHASE, *Curator*

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# SUMMER COURSES OF INSTRUCTION.

To the President of the University: —

Sir, — As Chairman of the Committee on Summer Courses of Instruction, I have the honor to report on the Summer School of Arts and Sciences.

It is fitting that mention be made of the late Professor Nathaniel Southgate Shaler, first Chairman of the Committee on Summer Courses, who died in service April 10, 1906. Professor Shaler's relations to the Summer School were unique. He was among the earliest to undertake vacation teaching, and watched its early uncertain progress with a faith that marked him for the leadership when it was seen that the venture needed to be organized in the hands of a committee. For nearly twenty years he gave himself with unflagging zeal and energy to the unfolding problems of this new field of college endeavor; and, when there was strait, he did not hesitate to assume, personally, financial risk and loss in behalf of the work; nor would he accept a salary for his services to the School, either as teacher or as chairman.

That the Summer School has won its way, enabling thousands to find inspiration in Harvard's Halls, giving example to scores of schools elsewhere, is due to the sympathy, foresight, resourcefulness, enthusiasm, and patience of Professor Shaler.

## Early Experiments with Courses for Teachers.

The Summer Courses of Instruction in Arts and Sciences have always been designed primarily for teachers in service, and for those preparing to teach, of both sexes; and, in this first report, a brief sketch of the steps by which the University has been led into its present relations to the Summer Courses seems not out of place.

In 1863 the University began an experiment the object of which was to provide instruction for graduates of colleges, teachers in public schools, and others, of either sex, who could not attend the regular classes in term-time, by means of lectures called "University Lectures." From 1863 to 1872 about twenty courses were given each year by members of the Harvard staff, or by eminent scholars from outside the University. These lectures were given on Saturdays or in the afternoons, and each course offered from six to thirty-

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five exercises, for a nominal fee. They treated a wide variety of subjects and were mostly of advanced grade. The registration is not recorded; except that in the fall of 1871 there were 155 persons — of whom 65 were men and 90 were women — attending the fifteen courses then in progress. This experiment was abandoned in 1872, having been adjudged to have failed "hopelessly" in attaining its objects.

Meanwhile, another plan was tried in 1869–70. Two systematic "University Courses of Instruction" were given, designed for "graduates, teachers, and other competent persons (men and women)"; the one in Philosophy, and the other in Modern Literature. There were no admission examinations; but each course closed with an optional "honors" examination. It was announced that a larger variety of similar courses would be offered in the next year. There were three lectures a week in each course, — at 3.30 P.M. on alternating week-days, — throughout the college year. Six men and seven women registered in the first year; no courses were offered in the second.

A third experiment was the institution, in 1871–72, of "The Teachers' Courses" in the Lawrence Scientific School. These were one-year courses in the elements of natural history, chemistry, and physics, "especially intended for teachers or persons intending to become teachers." Since the courses were given only in term-time to regularly enrolled students, they could not be taken by women or by teachers in service. These limitations on the attendance led several College officers to cast about for some way to provide opportunities for those who could not attend the regular classes. At this juncture the summer vacation was lengthened to thirteen weeks; and Professor Asa Gray announced that "Special instruction in botany will be given during the vacation to teachers who are unable to attend during term-time, and students who desire practice in the field can accompany Professor Gray and Dr. Farlow in their excursions." Professor Gray's experiment was successful, and was the beginning of the unbroken series of summer courses extending to the present. He made it with Dr. Farlow's aid in 1871; and repeated it in 1872, assisted by Dr. G. L. Goodale, then Instructor in Botany, — Dr. Farlow having gone to Europe for study early in 1872.

Professor Gray's course, given first in the summer of 1871, was announced, first, in the University catalogue of 1871–72. In its second year it received the following notice in the annual report of the President of the University: "In the spring and early summer of 1872 Professor Gray had a laboratory class in botany which was

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composed chiefly of women, who worked with energy and success. This last experience is suggestive."

PROGRESS OF THE SUMMER COURSES WITHOUT ORGANIZATION.

At the end of the summer of 1872 the period of experiment, in botany, was ended. A way had been found, in this subject at least, to attain an object for some years anxiously considered by various College officers, which was "To promote good teaching of elementary science in schools, by giving teachers opportunities for laboratory and field work." It remained to apply the new method to other subjects.*

Next in the lists was Professor Louis Agassiz. In the winter of 1872–73 he announced his plans for a summer school of natural history, which he wished to establish somewhere on the coast of Massachusetts; and appealed to the state legislature for financial aid. His project attracted the notice of a New York merchant who promptly offered the island of Penikese, in Buzzard's Bay, and $50,000 for carrying out the plan. The offer was joyfully accepted; and Agassiz spent the last summer of his life at Penikese, with more than fifty teachers and students sharing in most intimate and delightful study of his favorite subjects. This was in 1873. In the following winter Agassiz passed away. His genius made his school a success: but the situation was not advantageous, and his school did not survive its master, although it inspired other schools of like purpose in more favorable locations.

In the summer of 1874, Professor Josiah Parsons Cooke inaugurated the courses in chemistry, with 15 teachers and students in his classes, in Boylston Hall.

In the summer of 1875 Professor Shaler organized the first course in geology at Camp Harvard, Cumberland Gap, Kentucky. Professor Shaler has stated, in the Harvard Graduates' Magazine, April, 1893, that he "essayed" a summer course in geology, "in an informal manner," in 1869. In another published account of the Summer School he mentions 1868 as the date of his first experiment. He has not given an account of the nature or the results of these ventures. It is probable that they were attempts to unite teaching with

* It is worthy of note that the early experiments had sought to combine courses for graduates with work for teachers. This had led to making the courses of too advanced grade for teachers, and of an unsystematic quality that suited neither group. In 1872 the motives were separated; resulting, on the one hand, in the foundations of the Graduate School of Arts and Sciences, and, on the other, in the Summer School.

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his field work in geology. He has stated, however, that his course in geology was not "definitely planned" until the summer of 1875.

No new subjects were added to the foregoing list until 1887. Meanwhile the courses in botany were given every year, — after their introduction in 1871, at the Hunnewell lecture room and laboratory in the Harvard Botanical Garden, — except in the years 1882, 1884, and 1885. Geology was not given from 1881 to 1886, inclusive. The summer courses in chemistry have not once been omitted since their beginning in 1874. In the '70's the courses in chemistry and botany were well attended, but geology fell off. In the early '80's chemistry alone held an assured place. In the years 1884 and 1885 chemistry was the only subject offered; and only twenty-five students were enrolled. In 1886 there was a marked revival of interest in the summer courses. Forty-three were enrolled in chemistry; and botany was renewed with thirty-three students. In 1887 botany and chemistry were repeated; geology was resumed with fourteen students; and physical training was introduced by Dr. D. A. Sargent with fifty-seven enrolments.

Up to this time there had been no organization of the summer courses. Professor Shaler has said that they were: "Private ventures of those who taught them, the University giving only the use of the buildings and apparatus, and thus lending its countenance to the project." It should be added that the summer courses were announced in the University Catalogue from 1874 onward. It was in a financial sense that they were "private ventures," and in the sense that the courses were not recognized as a part of the regular College work and were not supervised by any authorized person or committee.

### Period of Organization and Expansion.

Whether due to lack of organization or to other causes, the record of the first fifteen years of the summer courses shows that their ultimate success was very uncertain. In all this period the highest enrolment was ninety-eight, in 1875. With some slight fluctuations, there had been a steady decline. But the gain in 1886, followed by the much larger increase in 1887, proved that there was great vitality in the purpose and plan of the work. At this stage President Eliot appointed the first committee to have charge of the summer courses, and named Professor Shaler its Chairman. The date of the appointment of this committee seems to be not a matter of record. It was not a committee of the Faculty of the College, but, as Professor Shaler says, of the Corporation; and was probably established in

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1887 or 1888. It is probable that some informal general oversight was begun as early as 1886, and that this was responsible for the growth of the Summer School which was noticeable first in that year. However, gain in strength was steady henceforth, although the College Faculty gave the summer courses no sanction until 1891, except the occasional credit to a student of a record in a summer course in lieu of a College examination by special vote in each case.

Formal recognition by the Faculty of Arts and Sciences was obtained through a vote on May 5, 1891, specifying the conditions under which eight of the nineteen courses given in that year might be counted in fulfilment of the requirements for degrees. Soon after, a committee of the Faculty was appointed to have immediate charge of the summer courses. Professor Shaler was named Chairman.

The effect of the Faculty vote was prompt. In 1892 the number of courses rose from 19 to 28, and the enrolment from 287 to 435. The World's Fair in Chicago, in 1893, checked the School for the year; but the enlargement of the work was notable in the '90's. In 1899 there were 44 courses, attended by 636 persons. In 1900 the enrolment leaped to 789, due, mainly, to the publicity given the summer work by the coming to Cambridge of over 1200 Cuban teachers to receive instruction planned for them by the University. In 1903 the number of students in the Summer School again increased abnormally, reaching 1186, owing to the meeting in Boston of the National Education Association, under the presidency of President Eliot. Omitting this exceptional year, the average enrolment from 1901 to 1907 has been 793, with 737 as the lowest, in 1902; and 842 as the highest, in 1905. The average number of courses given during this period was 64.

Since the record of the annual enrolment has been kept, beginning with 1874, the total number of persons listed is 12,455, of whom 8,210 were teachers. The fact that members return for more than one session, — so that many have been listed more than once, — would reduce these totals by 25% to 30%. It is well within bounds, therefore, to say that upwards of 8000 persons have attended the Harvard Summer School of Arts and Sciences; of whom above 5,000 were teachers; and more than 4,500 were women.

### The Summer School of 1907.

Statistics of the Summer School of 1907 show a satisfactory increase in the number of students in the following groups: persons registered; teachers; men; graduates; students; from New Eng-

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land; from the Middle States; and from Foreign States. The total of women shows a further decline in numbers; and the totals from the Southern and Lake States are still falling off.

A list of the courses of instruction, showing the enrolment in each, and indicating those accepted by the Faculty for degrees in Arts and Sciences, will be found in the report of the Dean of the Faculty of Arts and Sciences.

Below are noted some of the activities of the Summer School which are not mentioned in the Dean's report.

1. *Excursions to Places of Historic Interest.* — Seven excursions were arranged for members of the School. These were conducted by two graduates of the University, recommended for this service by the Department of History. Wednesday afternoons and Saturdays were used.

2. *Lectures and Readings.* — On Monday evenings, five lectures and readings were given by Mr. C. T. Copeland; on Wednesday evenings, six lectures on general topics were given by members of the teaching staff, or by University officers not engaged in the Summer School; on Tuesday and Friday afternoons, Mr. H. M. Kallen, Assistant in Philosophy, gave eight lectures on the "Philosophy of Art"; and on four other afternoons, members of the classes in Public Speaking gave readings of miscellaneous selections, and Mr. B. G. Willard, an Instructor, gave a lecture on "Voice and Vocal Method."

3. *Reception and Sociables.* — One formal reception and three informal sociables were given by the Committee on Friday evenings, in the Hemenway Gymnasium, open by ticket to all members of the Summer School and invited guests. The classes in Physical Education arranged one subscription party, open to any member of the School, on the last Friday evening; these classes gave an exhibition of their work on one evening.

*Morning Prayers.* — These were conducted each day from 8.45 to 9 P.M., in coöperation with the Summer School of Theology, by ministers selected by the officers of that School. The average daily attendance while both Schools were in session was 135; after the close of the Summer School of Theology the average was 73.

5. *Rest-Rooms and Parlor.* — Rooms in Phillips Brooks House were reserved for the use of women. A Matron, who is a trained nurse, was in charge, and gave help in cases of slight illness. Writing materials were provided. The large parlor in the House was open to both men and women. Some daily papers and magazines were placed there for members of the School.

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6. *Room for Reference-Books and Evening Study.* — The Historical Library in Harvard Hall was opened during the day and evening, for study and for the consultation of reference-books. The main purpose in opening this room was to provide a place where any instructor might deposit books for the use of his class to be accessible during the evening hours, when Gore Hall is closed. The average evening attendance was seven.

7. *Reduced Railway Fares.* — The Summer School is much indebted to the officers of the New England Passenger Association, as well as to those of the Trunk Line and of the Eastern Canadian Passenger Associations, for a renewal of the privilege of reduced rates over the lines in these Associations in 1907.

8. *Recreation.* — Members of the Summer School had the privileges of the tennis courts on Jarvis Field and of one of the University Boat-Houses on the Charles River, each on payment of a small fee to the Harvard Athletic Association. They could arrange for swimming lessons and practice at the pool in the Sargent Gymnasium on Everett street.

9. *Harvard Summer School Association.* — The School of 1907 was marked by the formation of the Harvard Summer School Association, whose object is to promote the welfare of the School and of its members. The Association includes all past members and officers of the Summer School. It promises to be serviceable in matters of general interest to its members; also in promoting meetings of groups of students for social purposes during the session of the School; as well as a valuable aid to the office of the School in distributing information about the summer courses. It is a pleasure to give below a copy of resolutions signed by the Executive Committee of the Association: —

"HARVARD SUMMER SCHOOL ASSOCIATION.

"CAMBRIDGE, August, 1907.

"The students of the Harvard Summer School have the honor and the pleasure of expressing to the Committee of the Faculty in charge, their grateful appreciation of the opportunities which they have been privileged to enjoy during the session of 1907.

"It is an inspiration in itself to be enrolled in the membership of the oldest and most famous college in the land; and, to breathe its atmosphere, to study in its halls, to associate with its faculty, are privileges long to be remembered.

"We have been deeply impressed by the spirit of sympathetic interest and helpfulness which pervades the school, giving to each day a new and added pleasure; alike, in the office where the patience and resources of the Chairman never fail, in the class-rooms where

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the instructors give themselves cordially and freely to individual needs, and in the student body itself, which quickly responds to the spirit of the school.

"We gratefully remember the delightful opportunities for recreation and entertainment so generously provided in social gatherings, afternoon and evening lectures and readings, historical excursions, and gymnastic exhibitions.

"The women students, peculiarly favored in having the doors of Harvard thrown wide open to them during the summer school term, wish especially to recognize the careful provision made for their comfort and convenience."

(Signed) WALTER D. HEAD, SETH SEARS, ALLEN H. KNAPP, ALFRED R. WINTER, ELEANOR M. COLLETON, MARY E. WYNNE, MAUD G. LEADBETTER, FLORENCE E. LEADBETTER. EDGAR L. RAUB,

10. *Circular Letter to Members of the School.* — Near the close of the session of 1907 a circular of inquiry was sent to all members of the Summer School. Three hundred and sixty replies were received; and some of the results may well find place here.

(*a*) *33% first heard of the School through a former member of it; 11% through an alumnus of the University; 14% through a friend who had not been to Harvard; 16% through correspondence with the University; 4% through an advertisement; 3% through a news item in a periodical; 12% could not recall; and 7% were Harvard students.

(*b*) 32% had been members of the School in a previous year; and 27% had attended some other summer school.

(*c*) 58% desired that the summer courses be credited for a degree, 28% for the bachelor's degree, and 30% for the master's.

(*d*) 68% preferred to dine at a restaurant provided by the University, — of whom, 19% liked the Memorial Hall plan in use in 1907, 11% preferred a college hall where a fixed charge per week ($5 to $6) was made, and 38% preferred to have food served on a strictly *à la carte* plan, — 15% preferred to board at a public restaurant, *à la carte;* 11% preferred to board in the private house where they roomed; and 6% preferred to dine in a private boarding house near their lodgings.

(*e*) 87% approved (many of them warmly) the Harvard plan of concentrated effort for six weeks on a single study.

* The percentages mentioned are *of those replying to the letter*, and not of the total membership of the School.

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(*f*) 56% prefer the Tuesday following Commencement for the opening day of the School; 32% prefer July 5; and 12% would be suited by either of these dates.

11. *Fees.* — A registration fee was collected from each student in 1907, for the first time. The fee was $2, and proved a necessity. There was an increase in tuition charges in some laboratory courses, making a uniform fee of $30 for such courses. The higher tuition in these courses is warranted by the increased cost of the instruction, due to the great amount of oversight required in the laboratory, etc. There was another slight increase in fees, produced by limiting the practice of allowing certain related courses to be taken together for a reduced fee.

12. *Receipts and Expenditures.* — The total income of the School for 1907 was $23,780; of which, $22,123 was from tuition fees; $1,566 was from registration fees; and $91 was the balance from the historical excursions. The expenses of the School (not including the account of Memorial Dining Hall) amounted to $23,212, including salaries for instruction, salary of the Chairman, printing, postage, advertising, stenographer, clerical help, laboratory expenses, reception and sociables, historical excursions, morning prayers, evening lectures, Phillips Brooks House, evening reading room, ice, and other minor items.

13. The Summer School Committee gratefully acknowledges the efficient and courteous coöperation of the Bursar's Office, of the College Library, of the Memorial Hall staff, and of other University Officers, including especially the Publication Office, in all details of the School in which they had a share; they also wish to express their appreciation of the indispensable aid received from the Chairmen of the several Divisions and Departments in planning the courses of study and in securing instructors for the courses; and they cordially thank the Instructors themselves, whose enthusiasm and devotion were the inspiration of a most successful and agreeable session of the Summer School.

## Some Problems and Needs of the School

1. *Lodgings.* — The University has depended entirely upon the abundant private lodging-houses in Cambridge to provide homes for those in the Summer School who come from a distance. Prices for rooms are reasonable, and Cambridge householders can accommodate twice as many as require rooms in the summer. The Summer School compiles a list of available places, and publishes it in the annual Announcement of the School.

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This method of lodging members of the Summer School is, in many respects, satisfactory, although the University can exercise no supervision or control of private lodgings, and cannot guarantee their quality. The method is open to the criticism of inhospitality towards the summer members of the University, who note the obvious fact that the University possesses many desirable rooms in the dormitories, unused in the summer, and learn that other leading institutions provide excellent dormitory accommodations for both the men and women who attend their summer schools. It would seem practicable for the University to put the indispensable furnishings, including bedding, into some of its dormitories; and to modify its present form of lease to students occupying these rooms during the college year, so as to retain the right to sublet the rooms in the summer time. The service is available in summer, as in winter; a rental could be collected for furniture and room, together, which would make the investment pay in winter; many students who can ill afford to furnish their own rooms in term time would be saved this outlay; rivalries and heartburnings due to inequalities of furnishings would be lessened; and summer members of the University would be satisfied. They would also be willing to pay such a rental as would make the plan profitable. A beginning could be made with a moderate number of rooms, well located, until experience showed how many rooms would be required.

2. *Table-Board.* — The problem of supplying table-board for members of the Summer School owes its difficulty, almost entirely, to the fact that the available dining halls of the University are too large; that their equipments are designed for boarding about 1000 young men, and are not subdivided into such units as can be operated, economically, with the smaller numbers who desire to use them in the summer. There are some special problems connected with the Summer School restaurant, of which may be named: (1) the loss during the interval between Commencement and the opening of the School, when it is necessary to pay the help, and keep the hall open, with almost no boarders; (2) the different catering required for the summer patrons, who are largely women and older men than the college student; (3) the fact that fully half of those who use the hall, or would use it, go out of town during Saturday and Sunday, and take meals elsewhere on these days of each week; (4) and the trouble of securing efficient help in summer, when most waiters and other dining-room helpers are in demand at seaside, mountain, and other resorts, where they prefer to work at that season.

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Notwithstanding the obstacles just mentioned, Randall Hall was operated, at no great loss, until the year 1905. Then, a combination of causes (including an absentee steward, who was managing a private restaurant at a summer resort, active competition with newly opened public restaurants, etc.) led to so considerable a loss of money that the officers of the Summer School were forced to consider some other plan. At this point the Corporation consented to open Memorial Dining Hall for 1906; and this experiment was tried again in 1907. All was done that could be done to keep down the expenses of so huge a plant; but the results were far from satisfactory financially. It is plain that nothing remains but to see whether Randall Hall may not be again made practicable; and, if that is impossible, to learn whether the University may safely depend upon private boarding-houses and public restaurants near the college. Such places have been ample for the needs; and, if the demand were laid upon them, the supply of table-board would probably be found to be more than sufficient.

But, aside from the question whether outside restaurants and boarding-houses can, and will, provide a sufficient supply of satisfactory board at reasonable prices, the question of the responsibility of the University to its summer members, and the possibility of endangering its own vital interests, must be considered. It is, of course, impossible to say how much effect dissatisfaction with Randall Hall, in 1905, may have had in causing the drop in attendance from 842 in 1905 to 779 in 1906; or to know whether Memorial Hall in 1906 pleased its patrons well enough to help produce the gain of 30 in 1907. There are causes, of much more weight, that affect the attendance; some of them will be noticed in the later divisions of this report; some have been noticed in division 1, above; and, always, the general standing of the courses offered is of most consequence. Nevertheless, the influence of a satisfactory college dining hall on the attendance must be noticeable, for teachers are spending their vacation in study and have the customary vacation appetites. It has been noted above that 68% of the replies to the circular letter last summer expressed preference for a college dining hall; and 38% expressed preference for an *à la carte* method of serving food. It would seem, therefore, that there is a choice between two evils: the opening of a hall, with the practical certainty of a money loss in its management; or depending on outside board, with strong probability of dissatisfaction and loss of students.

3. *Sabbatical Privileges.* — The question of the relation of summer teaching to the sabbatical privileges of Professors and Assistant

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Professors, has been repeatedly suggested. No solution that seems satisfactory has yet been proposed. It is evident that more than one summer of teaching would need to be reckoned as the equivalent of the academic year, or half-year. This fact is a serious obstacle to be overcome, for, although the several summers should not, of necessity, be consecutive, either the Professor might not be willing to teach a sufficient number of years to earn thereby a substantial sabbatical reward, or his courses might not prove desirable as summer courses so as to warrant their repetition.

It is manifestly fair, however, to consider years of acceptable summer teaching, already completed, as effective, in some just measure, in securing an earlier, or a longer, sabbatical term, or a modification of the honorarium attached to this term. It is probably true that those who teach in both summer and winter stand in greater need of the rest and refreshing of the sabbatical year; and also, in some cases, true that they cannot afford to take the year on half salary.

4. *Endowment.* — The Summer School has, of course, a great endowment in the plant of Harvard University. But the time has come when the School could most profitably use a considerable annual free income. This could be used for adding valuable courses which now must be left out because the attendance on them is not sufficiently assured in numbers to warrant the Committee in risking the cost of offering them. Pressing needs of this kind are noted in the next division of this report. It would help solve the problems of rooms and board for members of the Summer School. It would help, most of all, by enabling the University to pay better salaries to those who teach those courses which have demonstrated their usefulness as summer courses. It is a fact that the pay for a summer course (which is the equivalent in labor for the instructor of at least a "half-course" of term-time work) is at a rate, in the cases of Professors and Assistant Professors, as well as some Instructors, of not more, often less, than half their pay for the same work in term-time. A careful study of this point would show a surprising amount of self-sacrifice and devotion to the summer teaching on the part of those who engage in it, largely because the summer class, made up for the most part of earnest men and women, appeals to them strongly as a kind of work well worth doing for its own sake, and is, therefore, highly interesting.

5. *Counting Summer Courses for Degrees.* — In recent years the Committee has been much concerned with the question of the crediting of summer courses for the ordinary degrees by the Faculty of

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Arts and Sciences. Formerly, teachers, and others, who pursued summer courses, were very little occupied about academic credits. Indeed, the possibility of making summer work effective for the winning of the college diploma is a comparatively recent discovery. But the influx of graduates to teaching positions in secondary schools, the general rise in the requirements for teaching, and other causes, have operated to make teachers and school authorities, generally, take a new attitude towards a college degree. Many who were content ten years ago to take summer courses simply for the profit of the work, want the profit no less now; but they also require that their study shall be part of a plan leading towards graduation; they ask that it be certified by the institution offering it, so that it shall tell for professional advancement, or for a degree, or for both. These demands are very earnest; they exhibit a most hopeful development of educational work, and the Summer School Committee has been meeting them as fully as possible.

The use of the summer vacation by diligent college students, for study that will help them to win their degrees, has been growing at the same time that the teachers have found greater interest in degrees. Contrary to the prevalent impression, such students are *not*, largely, of the idle or incompetent class. They are in great measure serious young men and women, who find that summer study will enable them to save a year, or half a year, in winning their degrees; or who wish to use the summer for getting some subject for which they cannot find a place in their winter schedule. Vacation study has no attractions for the indolent.

In 1900 the number of courses accepted for a degree by the Faculty of Arts and Sciences was only 9 (17% of the total number given); in 1907 the number was 46 (63% of the total). The Faculty has formulated conditions for the counting of summer courses for the degrees; and stands ready, apparently, to credit any course recommended by the Department having the survey of that course. The Departments have been moving as rapidly as could be expected, in recommending their courses, with the exception of the English Department, which has recommended only one (Anglo-Saxon) of its ten courses. It is highly desirable that at least three of the English Composition courses, and that nearly all the courses in English Literature, be accepted as soon as possible, each as a half-course.

Courses which the University does not accept for degrees are not accepted, generally, elsewhere, either for degrees or for promotion; and thus both students and teachers are forced away from the

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courses that Harvard rejects, to courses, at other summer schools, that may be effective for their needs. It is true, moreover, that many who have no purpose to count their summer work are influenced adversely towards a course that is not counted. They are apt to conclude that the course is rejected because of some defect in it; whereas the motive of the Department for refusing to count it is generally based on the desire to keep the standard of the course high, coupled with the fear that the tone of the class would be lowered by the admission of college students wishing to count the work for a degree. Whatever grounds for this fear that may once have been supposed to exist, have disappeared; and there is now the remedy of the exclusion of an undesirable member from the class whose progress he obstructs. But the prospective summer student does not reveal his unfavorable and unjust decision, nor seek opportunity to correct it. Indeed, he could not attach weight to the usual explanation, above stated, for not counting a summer course; for if it were sound, it would utterly condemn the courses given in term-time, which are filled with undergraduates who wish to count them for a degree and could not take them if they were not to be counted.

The demand for courses that count for a degree is not limited to those courses that relate to the bachelor's degree only. There are many teachers who hold the first degree, and are planning to earn the master's degree by vacation study. It is now possible thus to earn the degree at some institutions; and the question must be faced here if the University is to hold the patronage of a large group of the best equipped teachers and principals of schools. At the present time very few courses can be offered in the Summer School that are of the grade to be counted for the master's degree; because there is not, under present conditions, sufficient demand here for them to make them self-supporting; the condition that a course be self-supporting, from its tuition fees, being forced on the School by the fact that it has no free income.

In the replies to the circular letter, 30 persons asked for courses in English that would help them towards the master's degree; 17 in Education; 17 in Mathematics; 16 in Chemistry; 12 in Latin; 7 in German; 7 in Greek; 5 in Economics; 5 in History; 5 in Philosophy; 5 in Physics; 5 in Romance Languages; 4 in Physiography; 3 in Psychology; 2 in Biology; 2 in Botany; 2 in Government; 1 in International Law; 1 in Natural History; and 1 in Mining.

In addition to offering and counting courses for degrees, some method is needed for teachers to use these courses to attain the

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degrees at Harvard. In some just way they should be credited for work done, and admitted to candidacy for the degree for which their study has fitted them. Plans need to be worked out which will guide them to the year when they can ask for leave of absence, when necessary, from their teaching, to reside at the University a sufficient length of time to win their goal. It should be possible that the master's degree be won by summer residence and study only.

It is obvious that in considering teachers as candidates for degrees, it would be unnecessary, in most cases, to apply the ordinary academic tests needed to guard undergraduate courses, — in respect to admission requirements, and other details of crediting work done. Most teachers have been the members of their classes who best satisfied these tests, at the time when the tests were of value in their education, — that was why they were chosen to teach. Important consideration must, in fairness, be given to that fact, to the end that they may not be unduly hampered by mere formal restrictions devised for the more youthful, and very different, general type of college candidate for a diploma. The success of the summer courses, in the high quality of class work, when no admission examination whatsoever is required, illustrates the needlessness of the entrance examination when the College may have the opportunity to admit to its privileges students whose capacity and aims are as distinguished as have been the rule in the Summer School.

The "Certificate Plan" of admission could safely and wisely be used in the cases of most teachers.

6. The Summer School is the best means yet devised here for utilizing the great educational resources of the University during the long vacation, when, without the School, so large a part of the equipment would be idle; and when there are many persons, besides teachers, who can find the opportunity for study which is denied them in winter. The value of the summer courses is, indeed, no longer doubted; the effectiveness of its methods has been well affirmed by experience; and the significance of the School in establishing mutually helpful relations between the University and the best secondary schools, is now clearly seen.

The future of the Summer School depends a great deal on the solutions found for the problems mentioned above, — problems of lodging and boarding its members; of endowment; of its offering of courses in relation to the needs of persons who are working for degrees, as well of those who are studying merely for improvement; and of the coördination of its courses with College requirements for the ordinary degrees.

JAMES LEE LOVE, *Chairman.*

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# RADCLIFFE COLLEGE.

To the President of the University: —

Sir, — As Dean of Radcliffe College, I have the honor to submit my report for the academic year 1906–07.

The number of students in actual attendance during the year was 468, as against 436 during the preceding year.

| | |
|---|---|
| Graduate Students | 60 |
| Seniors | 67 |
| Juniors | 67 |
| Sophomores | 84 |
| Freshmen | 84 |
| Special Students | 106 |
| Total | 468 |

At Commencement in June, 1907, seventy-eight students, one of whom had completed her residence in an earlier year, received the degree of Bachelor of Arts. Eight students, who had not been registered as Seniors, received the degree. Of the seventy-eight successful candidates, two received the degree *summa cum laude;* thirteen received it *magna cum laude;* twenty-two, *cum laude.*

Twenty candidates received the degree of Master of Arts. Four of the twenty had taken their first degree at Radcliffe; the others represented the following colleges: Bryn Mawr College, University of California, Carleton College, Colorado College, Mt. Holyoke College, Ohio Wesleyan University, Pomona College, Syracuse University, Vanderbilt University, Vassar College, Wellesley College, Whitman College, the Woman's College of Baltimore.

The Caroline I. Wilby Prize for 1907 was awarded to Mabel Ellery Adams, a special student, 1896–1904, 1905–1907, for a thesis entitled "An inquiry into the condition of one hundred deaf persons who have been pupils in the Horace Mann School in Boston." This prize was founded in memory of a loved teacher by her pupils in order to encourage original work by advanced students in Radcliffe College. Hitherto the award has always been made for original work undertaken in connection with the student's college work and not in competition for the prize. It has now been given seven times, in four cases to a successful candidate for the Ph.D. degree, in two cases to graduate students who were not studying for the

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doctorate. Miss Adams, the first special student to win the prize, is a teacher in the Horace Mann School, and her thesis was a part of her work as a student in the course in Social Ethics under Professor F. G. Peabody.

Examinations for admission were held in June, 1907, in Cambridge, Andover, Brookline, Chicago (Ill.), Concord (Mass.), Concord (N.H.), Fall River, Fitchburg, Lowell, Lynn, Manchester (N.H.), Milton, New York (N.Y.), Quincy, Springfield, Washington (Conn.), Worcester, and Youngstown (O.). They were also held in September in Cambridge. Three hundred and twenty-five candidates presented themselves for examination. Twelve were candidates for admission as Special Students; thirty-three candidates took part of the examination or worked off admission conditions; one hundred and seventy-four took the Preliminary Examinations, and one hundred and four the Final Examinations; two were admitted by examination to the Sophomore Class.

The results of the Final Examinations are given in the following table: —

| | Admitted. | Admitted "Clear." | Rejected. |
|---|---|---|---|
| June | 82 | 29 | 5 |
| September | 11 | 0 | 6 |
| Total | 93 | | |
| Total rejected | 11 | | |
| | 104 | | |

Ninety-three candidates were admitted as Freshmen in 1906. The entering class of 1907–08 numbers sixty-three.

Sixty Graduate Students registered during the year, forty-two of whom were from other colleges. Thirty-six students were admitted to fifteen full courses, and twenty-nine students to sixteen half-courses, of the "Courses primarily for Graduates in Harvard University open to competent students of Radcliffe College."

The members of the Academic Board for 1906–07 were Professor Byerly (Chairman), and Professors E. L. Mark, S. M. Macvane, H. S. White, E. H. Hall, H. W. Smyth, A. A. Howard, G. L. Kittredge, and C. H. Grandgent.

Elizabeth Cary Agassiz House has completed its second year of satisfactory use. The statistics of the dining-room are even more remarkable this year than last. The number of luncheons provided was over 28,000, served at a very low price. The annals of Agassiz House and of Bertram Hall are happy because uneventful, except that Bertram Hall has had its first case of serious illness, necessi-

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tating an operation for appendicitis, which was successful. The long-distance telephone made it possible to act at once under the direction of the parents in a distant state. This annihilation of distance removes one of the main causes of opposition to sending a girl to College.

Grace Hopkinson Eliot Hall was completed and ready for occupation on the first day of the college year, September 26, 1907. It stands in Shepard Street, near the corner of Walker Street, facing on the Radcliffe field. Like its neighbor, Bertram Hall, which it closely resembles outwardly, it is built of brick on the Salem model of Colonial architecture. The effect of the two buildings is admirable, whether the rear view from Shepard Street is taken or the front view from the field. The plan of the interior differs widely in the two halls. Bertram Hall was intended to house twenty-five students and to serve as a social centre for other possible dormitories; with that purpose in view, the beautiful library and dining-room, with the connecting gallery and the fine stairway, were planned. A duplication of these facilities for entertainment in a second hall would have been a mistake. It was also desirable to have a large number of rooms at moderate prices. With these considerations in mind, Grace Hopkinson Eliot Hall has been built to contain accommodations for forty-three students, beside the apartment for the Mistress, the parlors and dining-room, kitchen, and offices. The interior is pleasant and will be charming when the finishing touches have been added, and even in this brief time the tenants have learnt to look upon the hall as their college home and to care for it accordingly. The Mistress of the Hall, Miss Grace E. Machado, entered upon her duties in September.

To Mrs. David P. Kimball, the donor of Bertram Hall, we owe the gift of this second hall. Radcliffe can never thank her enough for her generosity and devotion, above all for her constant and faithful care for the best interests of the College.

The new Library is nearly completed; the hope that it would be ready for use in September was abandoned before the contract was signed, and the date fixed (November 1st) is past. Another hope — that the building of the new library would not interfere with the use of the old — has been fulfilled, and it will be a comparatively easy task to move the books the very short distance from the one to the other. After they are moved, the Gilman Schoolhouse, where the books have been kept since their removal from the charming little library in Fay House, cannot remain where it is; it would be an eyesore; even now it mars the effect of what will be a noble group

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of buildings. As stated in the Report for last year, it was Mr. Shurtleff's opinion that the Library should complete the group of which Agassiz House is the centre, and the Gymnasium the left wing, and it should in its general features correspond to the Gymnasium. Messrs. Winslow and Bigelow, the architects to whom the plans were entrusted, concurred with Mr. Shurtleff; and the architectural effect of the three buildings promises to be all that had been hoped. Because of the unusual grouping, the play of light on the faces is beautiful.

The working needs have not been sacrificed to architectural beauty. They have been amply provided against, for the present and for the future, in so far as the future can be foreseen. The main room is on the second floor, and occupies the area of the building with the exception of the space required for the Librarian's room and the stairway. The third floor gives another room as long and as broad as the reading-room on the second floor, but not so high. The first floor contains the entrance-hall, a large reading-room to the left of the hall, to the right a room to serve some future need, and another large room, which will be a memorial to Mrs. Henry Whitman. In this room will be placed the window, now in Agassiz House, which was Mrs. Whitman's last work. It was given to Radcliffe College for Agassiz House by a number of Mrs. Whitman's friends, but the setting in its present position has never been really satisfactory, and the donors agreed with the Committee on the Library building to remove the window to a place specially prepared for it in a room to be set apart as a memorial to Mrs. Whitman, and to be decorated and furnished by a Committee of the donors, at their expense, and in conference with the architects.

The endowment fund which was to duplicate Mr. Carnegie's gift of $75,000 has been increased by certain promised gifts and interest and amounts now to about $80,000.

Esther Fisher Hallowell, A.B. 1902, now Mrs. Arthur H. Morse, the efficient treasurer of the Library Fund, has resigned from the list of Associates on account of the removal of her residence from Medford to Kansas City.

On June 27, 1907, at the end of the college year, Mrs. Elizabeth Cary Agassiz died, at the age of eighty-four. She was associated with the Harvard Annex from the earliest days of the experiment; she was the first president of the Society for the Collegiate Instruction of Women; she grew more and more deeply interested in the work and its development; and at the time of the organization of Radcliffe College, she put aside her dread of publicity, and spoke in

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public at the hearing in the State House; it is said on high authority that her speech carried the day. She was the first President of Radcliffe College, and on her resignation in 1899, she was urged to remain as Honorary President; that position she retained until her death, though in 1903 she retired from active participation in the life of the College. She welcomed with unqualified delight the election of her successor, the Dean of the Faculty of Arts and Sciences in Harvard University. Her memorial is built to the outward eye in Elizabeth Cary Agassiz House, the gift of her friends and her children to the College, through her, on her eightieth birthday (December 5, 1902); but another memorial of her is among those things that are not seen and are eternal, — the memory of her character and temperament, of the atmosphere which she created about herself, of the ideals which she cherished and upheld, — the memory of these has passed into the spirit of the College, and is part of Radcliffe's rich inheritance, which it is our duty and our happiness to transmit to the generations of students to come.

AGNES IRWIN, *Dean.*

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# APPENDIX.

## REPORTS OF THE JOINT COMMITTEE ON THE ORGANIZATION OF THE UNIVERSITY.

To the President and Fellows and the Board of Overseers: —

The Joint Committee on the Organization of the University have the honor to submit the following report.

They heard several professors at a series of meetings, and the President communicated to the Committee letters received from other professors, and reported to the Committee the discussion in the Faculty of Arts and Sciences on the expediency of instituting a President's cabinet or council, and the results of that discussion. It appeared at the hearings and from the discussions in the Faculty that the idea of a President's cabinet, or a council of deans, or a group of vice-presidents with separate provinces, was almost unanimously distrusted by the Faculty as tending to the establishment of a new authority which would incline toward excessive conservatism. The Committee have considered for themselves all the various opinions and recommendations which have been brought to their notice, and the majority of the Committee have agreed on the following statement: —

The existing difficulties in the organization and administration of the University relate to the business of the Corporation, the President, and the various Boards and Committees of the Faculty of Arts and Sciences. It is the conclusion of the majority of your Committee that no changes are necessary in the functions of the Corporation, the President, and the Faculty Boards and Committees, but that valuable inprovements can be made in the present modes of performing those functions. The Corporation meetings have been of late years encumbered with masses of details. Last Summer a new Board was created, called the Resident Executive Board, consisting of the President, the Comptroller, the Bursar, the Inspector of Grounds and Buildings, the Secretary to the Corporation, the Assistant Dean of Harvard College, and the Regent. This new Board is to deal with a large number of administrative details which have heretofore been carried through the President to the Corporation. The Board has stated meetings once a fortnight, and disposes finally of most of the questions which come before it, referring to the Corporation, in a well-prepared state, such matters only as require action on the part of the President and Fellows. At the stated meetings of this Board the members

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have an opportunity of hearing about each other's work, and bringing about the desirable coöperation between their different offices. The establishment of this Board is an undoubted improvement, which has been effected since your Committee were appointed.

In the opinion of the majority of your Committee the President of the University does not need to be relieved of any function he now performs; but he ought to be relieved of details in many directions and to have more assistance than he now has in conducting the correspondence of the University. The appointment of a Secretary to the President (the title was subsequently changed to Secretary to the Corporation), at the instance of the Board of Overseers in 1901, was an important administrative improvement, and this improvement, in the judgment of the Committee, should be carried farther. The Secretary should have an assistant, a graduate of the College with a liking for administrative work, and a desire to render active service to the University. The Secretary to the Corporation should also be provided with larger quarters in University Hall. Through the Secretary and his assistant much of the President's correspondence can be conducted, and much of the Corporation business can be thoroughly prepared so as to save time at the Corporation meetings.

Since 1890, when the present Faculty of Arts and Sciences was first organized, the Faculty has greatly increased in size, and has more and more delegated its executive business to administrative boards and committees, and to the sections of the Faculty by subject of instruction called Divisions and Departments. The Faculty is much too large a body for executive work; but it is an invaluable body for discussion and legislation. Through its Deans and its various subdivisions and committees it now transacts its executive business much more effectively than formerly, and more effectively than any other Faculty in the University now conducts its business. The Faculty of Arts and Sciences, therefore, need not be changed in its structure, or in its functions; but the grounds on which its four Deans have been selected may well be somewhat broader in future, and the size of some of its subdivisions for executive purposes, like the administrative boards and standing committees, for example, may well be reduced. In selecting future Deans, more attention may be directed to their insight and foresight in educational matters, and their capacity to develop systematically their several sections of the University. Nevertheless, it will be necessary, in selecting Deans, to keep in view also their ability to deal successfully with the individual student. Already the four Deans in the Faculty of Arts and Sciences have acted with the President as a sort of council or committee to present to the Faculty projects for discussion.

Each Division or Department of the Faculty of Arts and Sciences consists of all the members of the Faculty who teach the subject which characterizes and defines the Division or Department, as, for example, the Classics, History and Government, Mathematics, or Chemistry. The

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membership of these Divisions or Departments is therefore large or small, according to the number of teachers provided for the several subjects taught in the Faculty of Arts and Sciences. The Chairmen of the Divisions or Departments are now selected by the President and the four Deans who sit in the Faculty; and these Chairmen are changed every few years. It is seldom that a Chairman serves more than five consecutive years, and seniority is not regarded in the selection of Chairmen. The Chairmen of large Divisions or Departments have a considerable amount of correspondence and other business which requires clerical assistance. In the opinion of your Committee, the College should provide a clerical force expressly to aid the Chairmen of Divisions and Departments in the dispatch of their official business.

The Administrative Boards and Committees of the Faculty might, in the opinion of your Committee, be advantageously reduced in size. This process has already begun, but might well be carried farther. Large committees are less effective than small committees, and they consume the time of an unnecessary number of University teachers.

The subordinate Boards and Committees heretofore established, or to be established, should be encouraged to take final action on all questions for the determination of which sound precedents have been settled, or which can be acted upon under standing rules of the Corporation or the Faculty. They should be advised not to refer to the Corporation or to the Faculties questions which involve no change of established policy or practice. When good judgment suggests that an exception be made to a general rule or practice, the Board or Committee concerned should be encouraged to make the exception itself. In other words, administrative discretion should be freely used by trusted officials and committees.

In conclusion, the majority of your Committee desire to express the belief that the organization of Harvard University is, in general, a singularly fortunate and successful one, and particularly that the functions of the President, as they have been developed during the growth of the University since the Civil War, are of high value, in that they tend to unify the University, and to place the experience of each Governing Board and every Faculty at the service of the whole institution. The chief innovation in the administration of the University since 1890 is the growing influence of the Divisions and Departments in the Faculty of Arts and Sciences. This growth is wholesome, and should be encouraged, and coördinated with the functions of the Corporation, the President, and the Faculty. It may be expected that the Divisions and Departments will ultimately control annual appointments, suggest promotions of young teachers, propose extensions of instruction, and devise and urge new expenditures for apparatus and equipment. Their action will need to be actively supervised by the President, the Deans, and the Faculty's Committee on Instruction. The functions of this last named Committee will probably need to be gradually enlarged; indeed, this process has already begun.

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It will be observed that the changes, or rather improvements, which your Committee suggest, are all natural outgrowths of present practices, or developments of measures already initiated.

(Signed) CHARLES W. ELIOT,
HENRY P. WALCOTT,
FRANCIS C. LOWELL,
LOUIS A. FROTHINGHAM.

DECEMBER 12, 1906.

The undersigned, a member of the Committee, is unable to concur in certain of the conclusions of the foregoing Report; especially in the statement contained in the paragraph beginning "In conclusion" (p. 3). He does not think, however, that any beneficial results would follow from a more detailed statement of the grounds of his dissent at this time. He, therefore, confines himself to a mere intimation that in his judgment far more comprehensive measures of reform would be desirable than those indicated above. So far as they go, however, the changes, etc., proposed would not seem to be in themselves open to objection. To them, therefore, as partial remedies applicable to existing conditions, he gives assent.

(Signed) CHARLES F. ADAMS.

DECEMBER 12, 1906.

The undersigned feels that the changes recommended in the majority report are probably in the right direction, but that they still leave the administrative organization of the University in a cumbersome and somewhat ineffective condition.

(Signed) JAMES J. STORROW.

JANUARY 9, 1907.

## TERMS OF THE WILLIAM BELDEN NOBLE LECTURES.

The William Belden Noble Lectures Fund, amounting on July 31, 1906, to $24,534.86, shall be held in trust by the President and Fellows of Harvard College on the terms and for the uses described as follows: —

1. The foundation having been established in memory of William Belden Noble shall bear his name and be known as the William Belden Noble Lectures.

2. The appointment of Lecturers upon this foundation is committed to the President and Fellows of Harvard College, hereinafter designated as the Corporation.

3. The Lectures shall be delivered annually at such time and place as the Corporation shall appoint. But it is the desire of the Founder that the time be the season of Advent, if possible, and that the Lectures be closely associated with the Phillips Brooks House and be given there. Each Lecturer shall have ample notice of his appointment. Each course of Lectures shall be published and their publication shall follow as soon as possible after their delivery. The income of the fund shall be devoted

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to these two ends, — (1) the payment of the Lecturers, and (2) the securing the publication of the Lectures. It is left with the Corporation to determine the number of the Lectures, to fix the compensation of the Lecturer, and to make provision for the publication of the Lectures. It is, however, understood that beyond securing the publication of the Lectures — in form as stated in Section 7 — all the income of the fund shall go towards the payment of the Lecturer.

4. The object of the Founder of the Lectures is to continue the mission of her husband, whose supreme desire was to extend the influence of Jesus as "the Way, the Truth, and the Life," and to illustrate and enforce the words of Jesus, — "I am come that they might have life and that they might have it more abundantly." The Founder has in view the presentation of the personality of Jesus, as given in the New Testament, or unfolded in the history of the Christian Church, or illustrated in the inward experience of His followers, or as the inspiration to Christian Missions for the conversion of the world. Both the Founder and he in whose name the Lectures are established were in deep sympathy with the teaching of the late Phillips Brooks; and a treatise by him entitled "The Influence of Jesus" (E. P. Dutton & Co., New York, 1879), and these among his published sermons: "The Light of the World" (Sermons, Vol. V, E. P. Dutton & Co., New York, 1892), "The Leadership of Christ" (Sermons, Vol. VI), and "The Church of the Living God" (Sermons, Vol. V, 1892); also "The Message of Christ to the Individual Man," by Alexander V. G. Allen, being the first Lecture given on the William Belden Noble foundation in the Series of 1898, entitled "The Message of Christ to Manhood" (Houghton, Mifflin & Co., Boston, 1898), will serve to guide the Lecturers in interpreting the spirit of this foundation. It is the desire of the Founder that the Lecturer for each year shall be himself animated by the further motive which inspires this foundation, — the hope of arousing in young men, and primarily in the students of Harvard University, the joy of service for Christ and humanity, especially in the ministry of the Christian Church. The scope of the Lectures is believed to be as wide as the highest interests of humanity. With this end in view — the perfection of the spiritual man, and the consecration, by the spirit of Jesus, of every department of human character, thought, or activity, the Lecturer will choose his subject. A copy of the terms of this foundation shall be sent to the Lecturer for each year with the notice of his appointment.

5. In order to manifest and promote the purpose of the Lectures, it is suggested that they be preceded and followed by prayer; but this suggestion is left to the discretion of the Lecturer.

6. If, for unavoidable reasons, there is failure in any year to secure a Lecturer, or the Lecturer should be unable to fulfil his appointment, or it should be deemed wise in the judgment of the Corporation in any year to omit the delivery of the Lectures, the income of the fund for said year shall be added to the fund. Should the fund be thus augmented in the course of time to $30,000, it is left to the judgment of the Corporation to deter-

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mine whether there shall be any further increase of the fund. If, after the fund has reached the sum of $30,000, it should be decided not to add the income to it of any year thereafter in which, for wise or necessary reasons in the judgment of the Corporation, the Lectures are omitted, the income of said year is placed at the disposal of the Corporation to be used by them for any purpose connected with the religious welfare of Harvard University, and whenever possible in the name and to the honor of William Belden Noble. But this provision, which recognizes the possibility of omission or failure to secure the delivery of the Lectures in any year, is not designed to negative or qualify the provision which calls for the annual delivery of the Lectures, the securing of which the Founder trusts to the most earnest efforts of the Corporation.

7. Each printed copy of the Lectures in each and every year shall contain a prefatory statement of the origin of this foundation and its purpose in the mind of the Founder as given above in Section 4, the said statement to be in form and substance satisfactory to the Corporation. The title-page and the outer cover of each printed copy shall bear the name of the foundation as well as the special title for the year, the date of delivery, and the Lecturer's name. The form, size, and binding of the printed Lectures shall, so far as possible, be uniform from year to year.

8. The copyright of each volume or series of the Lectures may be taken out in the name of the author, and he shall then be entitled to any proceeds from the sale of his work, in addition to receiving the income of the fund.

9. The Lecturer for each year shall be informed that, unless for some special reason to the contrary, due to exceptional circumstances and satisfactory to the Corporation, his Lecture or Lectures shall be from his original intellectual material, not used before and not to be used or incorporated into other works of his except by express permission of the Corporation, such courtesy to be acknowledged in the re-publication.

10. In selecting the Lecturer for each year the Corporation shall give careful consideration to any suggestions regarding the selection that they may receive from persons engaged in the religious activities of Harvard University, from the Dean of the Episcopal Theological School in Cambridge, from the Founder during her life, or from the Trustees who have hitherto held the power of appointing the Lecturers on this foundation, during their lives.

11. It is the desire of the Founder, in order that students may feel a direct responsibility for the successful delivery of the Lectures, that the Corporation should endeavor to enlist each year in the local arrangements the services of the religious societies grouped in Phillips Brooks House or of a few influential undergraduates. The Founder also desires that the President of the University should introduce the Lecturer at the opening Lecture of each course; or, if the President should be unable to perform this service, that he should delegate it to another officer of the University.

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## REPORT OF THE SECRETARY FOR APPOINTMENTS.

To the President of the University: —

Sir, — I have the honor of presenting a report of the work of the Appointments Office for the year ending September 30, 1907.

The total number of men registered with the Office on September 30, 1907, was 3,993 as against 3,338 at the same date in 1906, — an increase of 655. During the year 1906–07, as formerly, the demand on the University for teachers has exceeded that for men to fill business or technical positions.

The following table shows, as reported to the Office, the number of calls for teachers from schools, colleges or universities, and for men to take positions in business houses: —

| | | |
|---|---|---|
| Calls for Teachers: — | | |
| Direct, from Schools, Colleges, and Universities | 628 | |
| Indirect, through Teachers' Agencies | 139 | 767 |
| Calls from Business Houses: — | | |
| Direct | 246 | |
| Indirect, through Agencies | 6 | 252 |
| Total calls to fill Permanent Positions | | 1019 |

The following tables show the number of permanent positions filled. The total is 599: —

Permanent Teaching Positions.

| | | |
|---|---|---|
| Universities or Colleges: — | | |
| Harvard University | 170 | |
| Other Universities and Colleges: — | | |
| Regular Teachers | 80 | |
| Substitute Teachers | 2 | 252 |
| Technical Schools: — | | |
| Harvard University | 74 | |
| Other Technical Schools | 5 | 79 |
| Normal Schools | | 4 |
| Naval Academies | | 2 |
| Military Academy | | 1 |
| Government School | | 1 |
| Public High Schools | | 17 |
| Private Schools, Endowed Schools, Academies, Seminaries: — | | |
| Regular Teachers | 45 | |
| Substitute Teacher | 1 | 46 |
| Tutors or Companions (one year) | | 11 |
| Private Assistants to Professor | | 2 |
| Total | | 415 |

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### Administrative Positions (Educational).

| | |
|---|---|
| President of Normal School | 1 |
| Superintendents of Schools | 3 |
| Assistant Superintendent of Schools | 1 |
| Head-masters or Principals | 7 |
| Sub-master | 1 |
| Total | 13 |

### College Positions (Not Teaching).

| | |
|---|---|
| Auditor, Randall Hall Association | 1 |
| Clerk for College Office | 1 |
| Laboratory Assistant | 1 |
| Library Attendant | 1 |
| Proctors (College rooms) | 66 |
| Research Assistant | 1 |
| Secretary | 1 |
| Assistant Secretary | 1 |
| Director, Research School for Social Workers | 1 |
| Total | 74 |

### Permanent Business Positions.

| | | | |
|---|---|---|---|
| Art Company | 1 | Newspaper Reporters | 5 |
| Banking Houses | 8 | Publishing Houses | 3 |
| Brokerage Firms | 2 | Real Estate | 2 |
| Bureau of Corporations | 2 | Secretaries | 6 |
| Land Company | 1 | Telephone Companies | 2 |
| Law Offices | 6 | Wholesale Dealers | 2 |
| Manufacturing Concerns | 12 | Total | 52 |

### Permanent Business Positions (Technical).

| | | |
|---|---|---|
| Architects | | 3 |
| Chemists | | 9 |
| Engineers: | | |
| Civil | 2 | |
| Electrical | 12 | |
| Mechanical | 5 | |
| Mining | 3 | 22 |
| Foresters | | 10 |
| Pathologist | | 1 |
| Total | | 45 |

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The following table shows the number of temporary positions filled, — 1,452 in all: —

TEMPORARY WORK.

| | | | |
|---|---|---|---|
| Administrative | 3 | Newspaper Correspondents | 5 |
| Athletic Coaches | 3 | Night School Teachers | 4 |
| Attendants | 5 | Painter | 1 |
| Boatman | 1 | Photographer | 1 |
| Bookkeepers | 4 | Policeman | 1 |
| Canvassers | 16 | Printer | 1 |
| Caretakers of Houses | 3 | Proctors | 69 |
| Chauffeur | 1 | Proofreaders | 2 |
| Choremen | 39 | Railroad (Motormen and Conductors) | 8 |
| Clerks | 171 | Readers | 5 |
| Clock Repairer | 1 | Research Workers | 2 |
| Collectors | 9 | Rooms for Services | 4 |
| Companions | 5 | Secretaries | 8 |
| Computers | 2 | Settlement Workers | 9 |
| Correctors (Examination Books, Themes) | 7 | Snow Shovellers | 6 |
| Dramatic Club (Chair Movers, Scene Shifters, etc.) | 16 | Solicitors | 16 |
| Draughtsmen | 14 | Statisticians | 99 |
| Expressmen | 2 | Stenographers | 35 |
| Farm Hands | 3 | Store Clerks | 42 |
| Foresters | 8 | Substitutes for Schools | 5 |
| Furnace Tenders | 9 | Summer Camps (Councillors, Directors, Tutors) | 4 |
| Gardeners | 4 | Summer School Teachers | 7 |
| Geology Assistant | 1 | Supervisors of Study | 68 |
| Geology Expert | 1 | Surveyors | 3 |
| Guides | 46 | Teaching Assistants (College or Institute) | 5 |
| Hotel Help | 6 | Ticket Takers | 282 |
| Janitors | 3 | Timekeeper | 1 |
| Lecturers | 2 | Translators | 8 |
| Legal Assistant | 1 | Tutors and Companions | 46 |
| Library (Cataloguing) | 2 | Tutors (Special Subjects) | 189 |
| Literary Work | 2 | Typewriters | 20 |
| Marketman | 1 | Usher | 1 |
| Messengers (Errands) | 13 | Waiters | 2 |
| Meter Readers | 48 | Total | 1452 |
| Monitors | 17 | | |
| Museum (Cleaning Specimens) | 2 | | |
| Museum Guards | 12 | | |
| Musicians and Musical Directors | 10 | | |

Total permanent and temporary positions . . . . . 2051

The table on pages 346, 347 sets forth the geographical distribution of the permanent teaching, educational, and business positions filled.

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GEOGRAPHICAL DISTRIBUTION.

| | Universities or Colleges. | Technical Schools. | Normal Schools. | Naval Academies. | Military School. | Government School. | Public Schools. | Private Schools, Endowed Academies, Seminaries. | Tutors or Companions 1 year. |
|---|---|---|---|---|---|---|---|---|---|
| NORTH ATLANTIC DIVISION: | | | | | | | | | |
| Maine | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| New Hampshire | 2 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Vermont | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Massachusetts | 177 | 77 | .. | .. | .. | .. | 5 | 15 | 3 |
| Rhode Island | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| Connecticut | 3 | .. | .. | .. | .. | .. | .. | 3 | .. |
| New York | 4 | .. | 3 | .. | .. | .. | 1 | 12 | 2 |
| New Jersey | 3 | .. | .. | .. | .. | .. | 3 | 2 | 2 |
| Pennsylvania | 5 | .. | .. | .. | .. | .. | 3 | .. | .. |
| SOUTH ATLANTIC DIVISION: | | | | | | | | | |
| Maryland | .. | .. | .. | 2 | .. | .. | 1 | 1 | .. |
| District of Columbia | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| Virginia | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| West Virginia | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| North Carolina | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| Georgia | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Florida | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| SOUTH CENTRAL DIVISION: | | | | | | | | | |
| Kentucky | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Louisiana | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| Texas | 1 | .. | .. | .. | 1 | .. | .. | .. | .. |
| NORTH CENTRAL DIVISION: | | | | | | | | | |
| Ohio | 8 | 1 | .. | .. | .. | .. | 1 | 2 | .. |
| Indiana | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Illinois | 6 | .. | .. | .. | .. | .. | .. | 2 | .. |
| Michigan | 2 | .. | .. | .. | .. | .. | .. | 2 | .. |
| Wisconsin | 3 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Minnesota | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Iowa | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| Missouri | 7 | 1 | .. | .. | .. | .. | .. | .. | .. |
| North Dakota | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| South Dakota | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nebraska | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| Kansas | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| WESTERN DIVISION: | | | | | | | | | |
| Wyoming | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Arizona | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Idaho | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| Washington | 2 | .. | .. | .. | .. | .. | 3 | .. | .. |
| California | 3 | .. | .. | .. | .. | .. | .. | .. | .. |
| CANADA | 4 | .. | .. | .. | .. | .. | .. | .. | .. |
| FRANCE | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| EUROPE (or general travel) | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| JAPAN | 1 | .. | .. | .. | .. | 1 | .. | .. | .. |
| Total positions | 252 | 79 | 4 | 2 | 1 | 1 | 17 | 46 | 11 |

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GEOGRAPHICAL DISTRIBUTION (*concluded*).

| | President. | Superintendents. | Assistant Superintendent. | Head-masters or Principals. | Sub-master. | Proctors (College Rooms). | Private Assistants to Professors. | Business. | Business — Technical. | Totals for States. |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTH ATLANTIC DIVISION: | | | | | | | | | | |
| Maine | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 4 |
| New Hampshire | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 6 |
| Vermont | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Massachusetts | .. | .. | .. | 2 | 1 | 66 | 2 | 44 | 20 | 412 |
| Rhode Island | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 3 |
| Connecticut | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 |
| New York | .. | .. | .. | 2 | .. | .. | .. | 6 | 8 | 38 |
| New Jersey | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 |
| Pennsylvania | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 12 |
| SOUTH ATLANTIC DIVISION: | | | | | | | | | | |
| Maryland | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 |
| District of Columbia | .. | .. | 1 | .. | .. | .. | .. | 3 | 6 | 11 |
| Virginia | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 |
| West Virginia | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| North Carolina | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Georgia | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Florida | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| SOUTH CENTRAL DIVISION: | | | | | | | | | | |
| Kentucky | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 |
| Louisiana | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Texas | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| NORTH CENTRAL DIVISION: | | | | | | | | | | |
| Ohio | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 14 |
| Indiana | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Illinois | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 9 |
| Michigan | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 |
| Wisconsin | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 |
| Minnesota | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Iowa | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Missouri | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 9 |
| North Dakota | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| South Dakota | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Nebraska | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Kansas | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| WESTERN DIVISION: | | | | | | | | | | |
| Wyoming | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Arizona | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Idaho | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 |
| Washington | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 6 |
| California | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| CANADA | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 5 |
| FRANCE | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| EUROPE (or general travel) | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| JAPAN | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Total positions | 1 | 3 | 1 | 7 | 1 | 66 | 2 | 60 | 45 | 599 |

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The following table shows the demands on various Departments of the University for teachers in single subjects: —

| | | | |
|---|---|---|---|
| Semitic | 1 | Agriculture | 1 |
| Greek | 3 | Botany | 4 |
| Latin | 4 | Zoölogy | 6 |
| English | 43 | Biology | 5 |
| Public Speaking | 3 | Geology | 7 |
| French | 6 | Geography | 1 |
| German | 9 | Anthropology | 2 |
| History | 19 | Anatomy | 7 |
| Government | 9 | Physiology | 4 |
| Economics | 19 | Bacteriology | 6 |
| Law | 5 | Pathology | 6 |
| Philosophy | 14 | Hygiene | 2 |
| Psychology | 4 | Medicine | 18 |
| Social Ethics | 3 | Pharmacology | 1 |
| Education | 4 | Pediatrics | 2 |
| Fine Arts | 1 | Orthopedics | 3 |
| Landscape Architecture | 3 | Surgery | 12 |
| Architecture | 2 | Obstetrics | 3 |
| Drawing | 1 | Gynaecology | 3 |
| Music | 2 | Syphilis | 1 |
| Mathematics | 15 | Neurology | 1 |
| Astronomy | 3 | Ophthalmology | 3 |
| Physics | 9 | Laryngology | 3 |
| Chemistry | 28 | Mental Diseases | 2 |
| Engineering | 6 | Athletics | 1 |
| Mechanics | 1 | Gymnastics | 6 |
| Hydraulics | 2 | Total | 330 |
| Forestry | 1 | | |

The following table shows the number of men supplied to teach combined subjects: —

| | | | |
|---|---|---|---|
| Latin and Greek | 10 | Mathematics and Science | 3 |
| Latin, Greek, German, and French | 1 | Mathematics and Surveying | 1 |
| Latin and Mathematics | 2 | Physics and Chemistry | 3 |
| Latin and English | 1 | Physics, Chemistry, French, and German | 1 |
| English and Athletics | 1 | Physics, Chemistry, and general tutoring | 1 |
| English and German | 1 | Physics and general tutoring | 1 |
| English, History, Geography, and Latin | 1 | Shopwork | 1 |
| English and History | 3 | Applied Mechanics and Hydraulics | 1 |
| French and German | 3 | Physiography and Meteorology | 1 |
| French, German, and Latin | 1 | Mining and Metallurgy | 3 |
| French and Italian | 1 | Mineralogy and Petrography | 1 |
| French and Spanish | 5 | Anatomy, Laryngology, and Otology | 1 |
| Romance Languages | 13 | Histology and Embryology | 2 |
| German and Mathematics | 1 | Pathology and Neurology | 1 |
| German, Mathematics, and French | 1 | General Teachers | 3 |
| German and Latin | 1 | Total | 72 |
| History and Pedagogy | 1 | | |
| History, Geography, and Gymnastics | 1 | | |

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The salaries of 598 out of the 599 permanent positions filled amount to $449,699.00; divided as follows: —

| | Salaries. | Number of Positions. |
|---|---|---|
| Universities, Colleges, Technical and Normal Schools | $212,962.00 | 338 |
| Secondary Schools | 106,875.00 | 79 |
| Tutoring | 21,075.00 | 11 |
| Business | 108,787.00 | 170 |
| Total | $449,699.00 | 598 |

No report has been received from one man; his salary may be estimated at $520.

The above tables show the number of positions filled by the Appointments Office in coöperation with the various Departments of the University. The increase of 522 over last year is to be explained, as in former years, partly by the natural growth of the Office, but still more by the closer coöperation existing between it and the various Departments, and also by the advertising of the Office through the branch opened on May 1st, at 50 State Street, Boston, in connection with the Office of The Harvard Alumni Association. To this office have been removed the blanks of men desiring business or technical positions; and employers, consequently, have found it convenient to consult the records there. Large as is the total number of positions filled, yet it falls far short of including all the positions secured through the influence or recommendation of the various Departments of the University. It will be noticed that, although a large number of students annually secure positions through the influence of the Law and Medical Faculties, yet they are not included in the above figures. Furthermore, many temporary jobs are constantly being filled, no report of which ever reaches the Office. It is hoped that another year the positions obtained on the recommendation of the Professors of Law and Medicine and more of the odd jobs just mentioned may be reported to the Appointments Office.

Satisfactory as the general results may be, there is, as was pointed out last year, still much to be done in spreading the reputation of the Office among people both in Cambridge and Boston and throughout the country at large.

E. H. WELLS,
*Secretary for Appointments.*

## REPORT OF THE CHAIRMAN OF THE COMMITTEE ON ADMISSION.

To the President of the University: —

Sir, — I have the honor to submit to you a report of the work of the Committee on Admission.

During the past year, the Committee have received and acted upon one thousand and seventy applications for admission to Harvard, and one

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hundred and twenty-seven applications for admission to Radcliffe. I beg leave to present a summary of the action of the Committee upon the applications for admission to Harvard, together with statistics based upon the admission examinations of 1907, and an account of some of the results of our present system of admission by examination.

### Applications for Admission by Examination.

| | A.B. | S.B. | Total. |
|---|---|---|---|
| Admitted without conditions | 249 | 15 | 264 |
| Admitted with conditions | 260 | 70 | 330 |
| Total number admitted Freshmen | 509 | 85 | 594 |
| Admitted provisionally as Special Students | 22 | 18 | 40 |
| Refused admission | 66 | 47 | 113 |
| Candidates in June who did not reappear in September | 34 | 17 | 51 |
| Total number | 631 | 167 | 798 |

### Applications for Admission without Examination from Other Colleges and Scientific Schools.

| | |
|---|---|
| Admitted provisionally as Special Students, with promise of re-rating in accordance with record of first year in Harvard | 62 |
| Admitted as Freshmen | 10 |
| " " Sophomores | 81 |
| " " Juniors | 24 |
| " " Seniors | 4 |
| Advised to enter Graduate School | 11 |
| Refused admission | 14 |

### Applications for Admission as Special Students without Examination.

| | |
|---|---|
| Admitted | 78 |
| Refused admission | 38 |
| Total number of cases considered | 1070 |

### Statistics based upon the Admission Examinations of 1907.

*Preliminary Examinations.*

In addition to the seven hundred and ninety-eight Final Candidates noted in the figures given above, examinations were taken by nine hundred and twenty-eight young men who desire to divide their examinations among several examination periods. These young men registered as follows: —

| | |
|---|---|
| Candidates for the degree of A.B | 798 |
| " " " " S.B | 130 |
| Total | 928 |

Last year, the total number of men taking Preliminary Examinations was eight hundred and forty-three.

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## Classification of Candidates for Admission, both Final and Preliminary, according to Residence.

(For purposes of comparison, the corresponding figures for 1906 are given.)

| North Atlantic Division: | 1906. | 1907. |
|---|---|---|
| Maine | 18 | 28 |
| New Hampshire | 31 | 24 |
| Vermont | 6 | 11 |
| Massachusetts | 966 | 1051 |
| Rhode Island | 11 | 8 |
| Connecticut | 15 | 20 |
| New York | 236 | 230 |
| New Jersey | 33 | 25 |
| Pennsylvania | 70 | 63 |
| | 1386 | 1460 |
| **South Atlantic Division:** | | |
| Delaware | 5 | 3 |
| Maryland | 15 | 10 |
| District of Columbia | 13 | 11 |
| Virginia | 2 | 2 |
| West Virginia | 2 | 0 |
| Georgia | 2 | 2 |
| | 39 | 28 |
| **Western Division:** | | |
| Montana | 1 | 4 |
| Colorado | 5 | 4 |
| New Mexico | 1 | 1 |
| Arizona | 1 | 0 |
| Utah | 1 | 3 |
| Nevada | 1 | 1 |
| Idaho | 0 | 3 |
| Washington | 4 | 5 |
| Oregon | 5 | 4 |
| California | 18 | 18 |
| Wyoming | 0 | 1 |
| | 37 | 44 |
| **North Central Division:** | | |
| Ohio | 51 | 62 |
| Indiana | 10 | 5 |
| Illinois | 36 | 35 |
| Michigan | 7 | 12 |
| Wisconsin | 9 | 14 |
| Minnesota | 9 | 8 |
| Iowa | 6 | 7 |

| North Central Division: | 1906. | 1907. |
|---|---|---|
| Missouri | 16 | 12 |
| North Dakota | 2 | 1 |
| South Dakota | 1 | 2 |
| Nebraska | 3 | 0 |
| Kansas | 2 | 2 |
| | 152 | 160 |
| **South Central Division:** | | |
| Kentucky | 3 | 3 |
| Tennessee | 4 | 4 |
| Alabama | 1 | 1 |
| Mississippi | 1 | 3 |
| Louisiana | 1 | 1 |
| Texas | 2 | 1 |
| Arkansas | 2 | 0 |
| Oklahoma | 1 | 0 |
| | 15 | 13 |
| **Foreign:** | | |
| Canada | 1 | 0 |
| Cuba | 1 | 2 |
| England | 2 | 2 |
| Germany | 2 | 0 |
| France | 0 | 2 |
| India | 2 | 0 |
| Ireland | 1 | 0 |
| Italy | 1 | 1 |
| Mexico | 1 | 0 |
| Japan | 0 | 3 |
| Russia | 1 | 0 |
| Switzerland | 1 | 0 |
| | 13 | 10 |
| **Insular Territories and Dependencies:** | | |
| Hawaii | 5 | 9 |
| Philippines | 0 | 1 |
| Porto Rico | 0 | 1 |
| | 5 | 11 |
| **Home Unknown:** | | |
| | 4 | 0 |
| Total | 1651 | 1726 |

From these tables, it appears that the chief gain this year is in Massachusetts.

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CLASSIFICATION OF FINAL CANDIDATES FOR ADMISSION BY EXAMINATION IN 1906 AND 1907, ACCORDING TO THE SCHOOLS THEY ATTENDED.

| | 1906. | 1907. |
|---|---|---|
| Number of Public Schools | 117 | 125 |
| " " Private " | 67 | 62 |
| " " Endowed " | 36 | 36 |
| Total | 220 | 223 |
| Candidates from Public Schools | 337 | 346 |
| " " Private " | 254 | 254 |
| " " Endowed " | 214 | 198 |
| Total | 805 | 798 |
| Percentage of Candidates from Various Kinds of Schools: — | | |
| Public | 41.8 | 43.3 |
| Private | 31.5 | 31.8 |
| Endowed | 26.5 | 24.8 |

Among these schools, only one hundred and twelve were represented in the final examinations of both 1906 and 1907. This year, there were candidates from one hundred and eleven schools which sent no candidates in 1906. The College draws from a large number of schools in proportion to the number admitted each year; but our connection with the majority of them is only intermittent. The schools from which we receive students every year number less than forty.

The encouraging fact that appears in the tables above is the increase in the number of candidates applying for admission from public schools. This is probably the result of the establishment of the degree of S.B. in Harvard College, and the consequent recognition of a number of new subjects taught in high schools. Previously to 1906, when young men were first admitted to Harvard College as candidates for the degree of S.B., the percentage of candidates from high schools had dropped steadily for several years. Both last year and this year, there is an increase which may grow much larger if we adopt the still more liberal policy of recognizing as admission subjects for the degree of A.B. several subjects which are now recognized only for the degree of S.B. We have on our admission list Botany, Zoölogy, Civil Government, Economics, and Free-hand Drawing, — all of which we recognize in College as suitable subjects for the degree of A.B., but have not recognized thus far as subjects for admission except for candidates for the degree of S.B. Our inconsistent treatment of these subjects is bewildering to headmasters of schools, who cannot understand why two boys whose preparation for college has been identical except that one has chosen Physiography and Anatomy and the other Botany and Zoölogy should be distinguished from one another at entrance. Moreover, though we refuse to recognize Botany and Zoölogy as parts of the admission record of a candidate for

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the degree of A.B., we admit boys with conditions, and allow them to remove conditions by courses in Botany and Zoölogy. It is not to be wondered at that teachers of Botany and Zoölogy are bewildered by practices so inconsistent. It seems plain, however, that the steps we have taken, though they leave our relations with the schools still unsatisfactory, have improved those relations.

*Examinations of the College Entrance Examination Board.* — The experiment of accepting the examinations of the College Entrance Examination Board in place of our own continues to be successful by providing a means of access from places which we can hope to reach in no other way. This year, the number taking Board examinations more than doubled. The figures for this year and last, the only years in which we have had a practical working arrangement with the Board, are as follows: —

| | 1906. | 1907. |
|---|---|---|
| Preliminary Candidates . . . . . | 66 | 142 |
| Final Candidates . . . . . | 33 | 101 |
| Total . . . . . | 99 | 243 |

By means of these Board examinations, we have added twenty-one entirely new schools to our list, nineteen of which are outside of New England. If the rate of increase this year is maintained, as we have every reason to hope, these examinations will be a means of extending the influence of the University to a very considerable extent.

In one respect, our administration of Board examinations probably needs correction. Thus far, we have allowed entire freedom in the taking of Board examinations. As a consequence, young men who taste the luxury of hard work only when threatened with the loss of some pleasure have taken both Harvard and Board examinations, hoping to secure insurance against failure. As we re-read the Board books, our examiners are thus compelled to read two examination papers for one man; and our office records are unnecessarily complicated. By permitting this combination in examinations, we also put more emphasis upon them than they deserve. To correct these defects, it will be sufficient to refuse to recognize at any one examination period Harvard and Board examinations in the same subjects.

This practice of taking both Harvard and Board examinations has been useful, however, by illustrating in striking ways weak points in our system of admission. The double examinations mentioned above showed very clearly how uncertain examination records are as measures of ability to do College work. I give below the results of these double examinations in some of the subjects. These examinations were taken in successive weeks. The first grade in each case is that given on the Board examination.

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## TABLE I.

| | History. | Algebra. | Plane Geometry. | Physics. |
|---|---|---|---|---|
| 1 | . . | E C | . . | F D |
| 2 | F D | . . | . . | . . |
| 3 | . . | . . | F C | . . |
| 4 | F C | . . | . . | . . |
| 5 | F D | . . | . . | . . |
| 6 | E C | . . | . . | . . |
| 7 | F C | . . | . . | . . |
| 8 | . . | . . | E C | . . |
| 9 | . . | . . | F D | . . |
| 10 | . . | F D | . . | . . |
| 11 | E C | . . | . . | . . |
| 12 | E B | . . | . . | . . |
| 13 | . . | . . | . . | F A |

## TABLE II.

The candidates represented in this table failed in the Harvard examination but were passed by both Harvard and Board readers in the same subjects at the Board examinations. The first grade in each instance is that given by the Board readers; the second, the grade given by the Harvard readers on the same book.

| | English. | French. | History. | Algebra. | Plane Geometry. | Logarithms. |
|---|---|---|---|---|---|---|
| 1 | D D | . . | . . | . . | C C | . . |
| 2 | . . | . . | . . | C D | . . | . . |
| 3 | . . | . . | . . | . . | C D | . . |
| 4 | . . | . . | . . | . . | C C | . . |
| 5 | . . | . . | . . | . . | . . | D D |
| 6 | . . | D D | . . | . . | C D | . . |
| 7 | . . | . . | . . | . . | . . | D D |
| 8 | . . | . . | . . | . . | . . | D D |
| 9 | . . | . . | . . | . . | B C | . . |
| 10 | . . | D D | . . | . . | . . | . . |
| 11 | . . | . . | C D | . . | . . | . . |
| 12 | . . | . . | . . | . . | C D | . . |

## TABLE III.

The candidates represented in this table passed both Board and Harvard examinations with somewhat marked differences in grades. The first mark in each instance is that given by the Board examiners.

| | German. | French. | History. | Algebra. | Geometry. | Physics. |
|---|---|---|---|---|---|---|
| 1 | . . | . . | . . | . . | B D | . . |
| 2 | . . | . . | . . | D A | . . | . . |
| 3 | . . | . . | . . | B D | . . | . . |
| 4 | . . | . . | . . | C A | . . | . . |
| 5 | . . | . . | C A | . . | A C | . . |
| 6 | . . | . . | . . | . . | B D | . . |
| 7 | . . | . . | . . | . . | . . | D B |
| 8 | . . | . . | . . | . . | A D | . . |
| 9 | . . | . . | . . | . . | . . | D A |
| 10 | . . | . . | B D | . . | . . | . . |
| 11 | . . | . . | . . | A C | . . | . . |
| 12 | . . | B D | . . | . . | . . | . . |
| 13 | B D | . . | . . | . . | . . | . . |

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The tables which have been made of these records show clearly one of the weaknesses of our system of determining admission. Each June and September, the Committee on Admission are confronted with a great mass of records which they know to be very uncertain evidence with respect to fitness for admission, however good it may be with respect to training in specific subjects. They have tried to provide a corrective for the uncertainty of examination records by calling for full information in regard to school records; and their efforts in this direction have been rewarded with considerable success. But a means of correcting defects as they arise is not a cure for an evil that is a part of a system, and which has endless powers of reproduction.

*Final Candidates for Admission who took more than the Required Number of Examinations.* — The records of candidates who took more than the required number of examinations are especially interesting, in view of the contention made by some headmasters that colleges in general require more work for admission than can be done well, and that Harvard is the chief offender in this respect. Out of the seven hundred and ninety-eight Final Candidates, two hundred and three took examinations in more than the required number of subjects. The amount of extra work offered by individuals varied from one admission subject counting one point to English *A* and admission subjects counting seven points. These young men represented seventy-nine schools in all, divided as follows: —

| | |
|---|---|
| Public Schools . . . . . | 40 |
| Private " . . . . . | 23 |
| Endowed " . . . . . | 16 |
| Total . . . . . | 79 |

The records of these young men were generally good, as is indicated by the following table showing the number of honor grades (A or B) that they received: —

| One. | Two. | Three. | Four. | Five. | Six. | Seven. | Eight. | Nine. | Ten. | Eleven. | None. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 43 | 41 | 31 | 23 | 11 | 6 | 1 | 8 | 1 | 2 | 1 | 35 | 203 |

The difficulties of which the schools complain are not caused by the amount of work asked for, but by the ill-adjustment of college tests to school programmes.

The facts given above show that if a young man has the will to work he can do more than the College asks for, and do it well; but it is also true that our regulations have permitted him to do it badly with no loss of credit. During the last year, the Faculty, on recommendation of the Committee, established the following rule: —

> No extra admission subject will be counted as a course or half-course towards a degree unless offered in advance as the equivalent of a College course, and unless the examination book has been read with that end in view, and marked not lower than C.

This rule was intended to correct a very obvious defect in our regulations for admission examinations arising from our practice of allowing

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candidates to anticipate, by means of admission examinations, work which counts towards a degree. The following example of the working of our admission examinations will show why the Committee were induced to recommend the rule given above. In 1906, a certain young man was admitted without conditions, and with one extra subject passed with grade D. His record contained only three grades above C; and one of these grades was attained only at the third trial. Instead of entering College, this young man returned to school, where it subsequently appears he spent, so far as College work goes, an unprofitable year. Last June and last September, he presented himself again for examination in extra admission subjects, with the following results: —

| June, 1907. | | September, 1907. | |
|---|---|---|---|
| English *A* | E | English *A* | E |
| Elementary Greek | D– | Logarithms | D |
| " Physics | D | | |
| Solid Geometry | D | | |
| Logarithms | E | | |

Under the rules, this young man can receive sufficient credit to enable him to register, if he so desires, as a Sophomore; that is, our regulations assign more credit for work done in a preparatory school — work, moreover, that was very imperfectly tested — than would be given for work of a higher grade done in Harvard College, and completed with higher grades. This young man can graduate by doing only twelve courses, with grades above D in eight. It should be observed that he receives for a single two-hour examination passed with the grade of D— an amount of credit equivalent to two College courses in which sixteen hours of examinations are required, to say nothing of less formal tests under our own instructors. The rule given above, therefore, was aimed at a very obvious defect; but it is itself defective in that it does not go far enough. Thoroughly to correct the defects in our regulations governing the anticipation of College work, we should separate examinations for such a purpose from our admission examinations, which should be used for admission only. By using admission examinations for purposes other than to determine fitness for admission, we inevitably lower the standard of our own degrees.

### Ages of Candidates Admitted by Examination.

The ages of men admitted by examination last June and September were as follows: —

| Ages. | Number of Men. | Ages. | Number of Men. |
|---|---|---|---|
| 15–16 | 4 | 20–21 | 40 |
| 16–17 | 50 | 21–22 | 9 |
| 17–18 | 181 | 22–23 | 2 |
| 18–19 | 199 | 24–25 | 3 |
| 19–20 | 105 | 34–35 | 1 |
| Total | | | 594 |

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The average age of these men is eighteen years, four and four-fifths months. Two years ago, when the average age of the Freshman Class was computed, it appeared to be eighteen years, nine and four-fifths months. The bases of these figures are not quite the same; but it would seem as if there is some slight ground for hope that the average age at admission is being gradually lowered.

The next tables give the percentages of failure in the subjects in which admission examinations are held: —

| Elementary. | Preliminary Candidates. June and September. | All Candidates. June. | All Candidates. September. |
|---|---|---|---|
| English | 42.5 | 41.5 | 35.9 |
| Greek | 5.3 | 19.0 | 14.2 |
| Latin | 23.2 | 26.2 | 70.9 |
| German | 32.4 | 35.6 | 60.0 |
| French | 34.7 | 41.0 | 51.3 |
| History | 17.0 | 23.6 | 26.8 |
| Algebra | 18.0 | 22.0 | 29.9 |
| Plane Geometry | 20.3 | 25.3 | 40.6 |
| Geometry | 23.3 | 14.4 | 41.6 |
| Physics | 24.3 | 24.5 | 25.3 |
| Chemistry | 33.9 | 31.0 | 32.2 |
| Geography | 50.0 | 33.3 | 66.6 |
| Physiography | 100.0 | 85.0 | 75.0 |
| Anatomy | 50.0 | 73.3 | 33.3 |
| Harmony | 0.0 | 41.6 | 50.0 |
| Botany | 50.0 | 25.0 | 100.0 |
| Zoölogy | 0.0 | 9.6 | 0.0 |
| Civil Government | 100.0 | 62.9 | 56.2 |
| Economics | 100.0 | 66.6 | 71.4 |
| Architectural Drawing | 0.0 | 100.0 | 100.0 |
| Freehand | 28.5 | 40.9 | 33.3 |
| Projections | 28.5 | 40.0 | 28.5 |
| Blacksmithing | 12.5 | 35.2 | 0.0 |
| Chipping | 0.0 | 21.0 | 20.0 |
| Machine Work | 0.0 | 29.4 | 0.0 |
| Woodworking | 46.1 | 63.6 | 14.2 |
| **Advanced.** | | | |
| English *A* | 50.0 | 50.0 | 69.2 |
| Greek | 0.0 | 10.0 | 31.2 |
| Latin | 31.4 | 46.7 | 68.4 |
| German | 32.6 | 38.1 | 51.6 |
| French | 38.2 | 52.7 | 70.3 |
| History | 75.0 | 45.7 | 62.2 |
| Algebra | 60.0 | 51.1 | 42.2 |
| Solid Geometry | 47.3 | 44.5 | 43.7 |
| Logarithms | 33.3 | 47.8 | 51.2 |
| Astronomy | 0.0 | 57.1 | 0.0 |
| Meteorology | 11.1 | 24.1 | 100.0 |
| Physics | 50.0 | 80.0 | 100.0 |
| Counterpoint | 0.0 | 0.0 | 100.0 |

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The percentages of failure, especially in the prescribed subjects, are high. Many failures are to be expected in those subjects which are taken by few candidates, but that over forty per cent. should fail in English indicates very decided defects somewhere, either in the schools or in the relations between schools and the College.

The next table shows, in order of the number of choices, the offerings of advanced subjects in the June examinations: —

| | | | |
|---|---|---|---|
| French | 440 | History | 118 |
| Latin | 426 | Algebra | 86 |
| German | 249 | Meteorology | 29 |
| Greek | 199 | Astronomy | 7 |
| Logarithms | 168 | Physics | 5 |
| Solid Geometry | 155 | Counterpoint | 2 |

There is some slight indication that the modern languages are superseding the ancient languages in the schools, in spite of the fact that the influence of the College is exerted in favor of the ancient languages.

The most significant tables are those which follow, showing what proportion of the candidates admitted failed in each prescribed study and in elective studies.

The first table divides admitted men according to the degrees for which they are candidates, and shows what proportion of them were admitted with conditions in prescribed subjects.

| Candidates for A.B. | | Candidates for S.B. | |
|---|---|---|---|
| English | 3.5 per cent. | English | 3.6 per cent. |
| Greek or Latin | 2.5 " " | German or French | 28.9 " " |
| German or French | 3.3 " " | German and French | 4.8 " " |
| History | 4.8 " " | History | 6.0 " " |
| Algebra | 2.5 " " | Algebra | 0.0 " " |
| Plane Geometry | 9.0 " " | Plane Geometry | 4.8 " " |
| Science | 11.9 " " | Solid Geometry | 36.1 " " |
| | | Science | 8.4 " " |

The following table shows the extent to which men were admitted conditioned in elective subjects: —

| Candidates for A.B. | | Candidates for S.B. | |
|---|---|---|---|
| One point | 34.4 per cent. | One point | 69.8 per cent. |
| Two points | 30.9 " " | Two points | 53.0 " " |
| Three " | 18.6 " " | Three " | 38.5 " " |
| Four " | 19.5 " " | Four " | 27.7 " " |
| Five " | 3.1 " " | Five " | 18.0 " " |
| Six " | 1.9 " " | Six " | 4.8 " " |
| Seven " | .5 " " | Seven " | 1.2 " " |
| Eight " | .3 " " | | |

These tables show the very considerable extent to which secondary school work is mixed with College work. This year about fifty-five per cent. of those admitted to the Freshman Class were admitted with conditions. This seems a very large percentage; but it is much lower than it has ever been before. Last year, the percentage of Freshmen admitted

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with conditions was sixty-eight. For the years preceding 1906, no accurate figures are obtainable because admission was then in the hands of several committees, who did not keep records in such a way as to enable us to obtain accurate figures. So far as can be ascertained, however, the percentage of men admitted with conditions for the four years preceding 1906 was between seventy and eighty. The increase in the number of men admitted without conditions this year is due to recent changes made in the rules governing admission, rules which formerly actually compelled men to enter with conditions.

The first of the two tables given above deserves especial attention because it exhibits the extent to which our present methods of admission interfere with College work. The young men represented in this table must do one of two things, either they must continue the school subject in which they are conditioned by the side of their College work, and run for luck at some subsequent examination, or they must take a College course in the subject in which they are conditioned. Both of these methods injure College work. The first method puts an unreal value on examinations, and compels the College to appear in the light of holding up a D— in a school subject as an achievement without which the College will not confer a degree. It is an especially objectionable method when it results, as it sometimes does, in a man's staying in College four years without removing a condition in a subject which the College has "prescribed" for admission. The second method is more respectable: but it compels us to give elementary courses at the expense of the time and energy of teachers who might otherwise do better things.

### The Obstructive Nature of the Requirement of Latin Poetry in Elementary Latin.

During the last two years, the Committee have received numerous complaints in regard to the requirement in Elementary Latin based on the fact that the requirement called for a knowledge of Latin poetry at the end of the third year of a school course, whereas most schools give no instruction in Latin poetry until the fourth year. To get a clearer understanding of the situation, the Committee addressed a letter of inquiry to the schools in the North Central Association of Colleges and Secondary Schools, asking to what extent instruction in Latin poetry was given previous to the last year of the school course. At about the same time, a committee of the Board of Overseers — the Committee on the Relation of the University to Secondary Schools — made a similar inquiry of schools on the regular Harvard list, that is, the schools which have within the last ten years sent boys to Harvard. The results of both investigations were the same — that is, they both showed that in the majority of schools it was impossible for a boy to get instruction, within the regular programme, which enabled him to take our examination in Elementary Latin. Out of eighty-six schools on the Harvard list, only twenty-two found no difficulty with the present requirement; and of these twenty-two schools nineteen were in

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Massachusetts, and only one was outside New England. Sixty-four schools replied that they were unable to adjust their programmes to the Harvard requirement, and that they believed it would be greatly to their advantage and to that of the College if the College made it possible for a boy to take a preliminary examination in Latin which did not include Latin poetry. Among the schools in the North Central Association, fifty-seven replied that they gave instruction in Latin poetry before the last school year; one hundred and forty-seven replied that they did not give instruction in Latin poetry until the last year. From the replies made by many of those who do give instruction in Latin poetry before the last year, it seemed probable that they read too little poetry to enable a boy to meet our requirement, though they give more instruction in Cicero than our requirements call for. The objections made by the schools to the Harvard requirement may be summarized as follows: —

That as the Harvard requirement is different from that of every other college, it compels boys who are going to Harvard to secure a different treatment, and puts undue emphasis on examinations.

That it is impossible for schools which send but few boys to Harvard to provide, within the regular programmes, for the different treatment which is necessitated by the requirement.

That on account of this differentiation in requirements, early in a school course good boys are turned to other colleges.

As a result of these inquiries, the Faculty, on recommendation of the Department of the Classics, has, since this report was begun, changed the definition of Elementary Latin.

The history of this requirement in Elementary Latin is very instructive with respect to the defects in our present system. For years, a single Department has seriously checked resort to the University by setting examinations at variance with the programmes of schools throughout the country. Granted that the Department is right in its theory, nevertheless in making that theory part of our system of admission we took a very effective means of making ourselves provincial. This requirement in Latin peculiar to Harvard was encountered by boys a year before they came to College, when the hold of the College upon them was weakest. They found then that through no fault of their own they could not take an examination essential to their plan of admission. Naturally, many of them went elsewhere. The chief difficulty created by this requirement in Latin has now been removed, though the definition is still at fault, I think, in that it prescribes examinations which depart considerably from the Harvard system of making examinations tests of power rather than mere tests of knowledge of specific things. The lesson to be derived from our experience with Elementary Latin is that all our definitions should be carefully compared with school programmes, and with other college definitions of examination subjects, with a view to removing from them any peculiarities that simply obstruct without testing capacity, and also any prescriptions which interfere with the liberty of schools in preparing boys for college work.

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The difficulties caused by the requirement in Elementary Latin constitute only one of the problems with which the Committee have dealt, though unhappily the others are not so near solution. Through their experience, they have become aware that our system of admission is essentially local in character, and therefore not altogether efficient as a means of selecting the best boys for the College, irrespective of the part of the country they live in, and the kind of school they have attended; that our use of our admission examinations to influence and prescribe school programmes, and to determine the character of our degrees as well as to select students, tends very greatly to narrow the field within which we can select our students, and is responsible for serious evils which tend to lower scholarship both in school and in college; that if we are to maintain the present "point" system, the ratings given to ancient and modern languages need readjustment; that one practical effect of our system is that it encourages boys to acquire "points" or numbers of subjects irrespective of doing anything well, for to pass eleven examinations, all with the grade of D—, will advance a man farther towards his degree than to pass nine examinations with grade A; and that the bad effects of this last characteristic are greatly intensified by the fact that certain examinations are deliberately made very difficult but are marked on a very low standard. These are some of the aspects of our system of admission which provide the Committee with problems for the solution of which they can as yet only look forward with hope, tempered by a knowledge of the great difficulty of making changes in a system so intricately bound up with special interests. As I hope I have suggested by the account above, we are at present in many ways hampered by a system of admission ill-adjusted to present conditions. Our regulations retain the character produced by conditions prevailing at a time when the relationship between Harvard and the schools from which her students came was much closer than it is at present, and when students mainly continued in College the subjects they had begun in the secondary school. This close relationship no longer exists. The College is now rightly of relatively less importance among the influences which form the programmes of secondary schools than the needs of the communities in which the schools are situated; and it is characteristic of boys entering College to turn to new fields of instruction. We need a scheme of admission requirements so broad and so flexible that it will serve as a means of selecting for the College the best boys from all parts of the country. To get such a scheme, we must be willing to recognize a great variety of school programmes, and to abandon absolutely all attempts to prescribe the way subjects shall be taught, using our examinations not as a means of prescribing school programmes or as a means of determining the character of our degrees, but simply as a means of testing fitness for admission.

J. G. HART,
*Chairman of the Committee on Admission.*

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## TABLE I.

### Illness Report, 1906–07.

| Diseases. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May. | June. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Appendicitis | .. | 4 | 4 | 1 | 4 | 1 | 5 | 4 | 1 | 3 | 27 |
| Asthma | .. | 2 | 1 | .. | 4 | 2 | 1 | 2 | .. | .. | 12 |
| Bronchitis | .. | 1 | 7 | 7 | 5 | 6 | 10 | 11 | 5 | 4 | 56 |
| Chicken-pox | 1 | .. | .. | 3 | .. | 1 | .. | .. | 2 | .. | 7 |
| Colds — unclassified | .. | 7 | 16 | 27 | 9 | 27 | 35 | 16 | 15 | 2 | 154 |
| Coryza | .. | .. | .. | 1 | .. | 3 | 4 | .. | 1 | 1 | 10 |
| Diarrhoea | .. | 2 | .. | .. | 2 | 1 | .. | 2 | .. | 1 | 8 |
| Diphtheria | .. | 1 | .. | .. | 2 | .. | 1 | .. | .. | .. | 4 |
| Ear, of the | .. | 1 | 3 | 2 | 3 | 1 | 7 | 5 | .. | 1 | 23 |
| Eye, of the | .. | 7 | 8 | 3 | 6 | 5 | 15 | 13 | 6 | 2 | 65 |
| General Debility | .. | 12 | 14 | 9 | 5 | 15 | 3 | 2 | 12 | 3 | 75 |
| Headache | .. | 1 | 1 | .. | 3 | 1 | 1 | 1 | 1 | .. | 9 |
| Heart, of the | .. | .. | .. | .. | 1 | 2 | 1 | 1 | .. | .. | 5 |
| Indigestion | 1 | 12 | 12 | 10 | 7 | 10 | 10 | 7 | 8 | 4 | 81 |
| Insomnia | .. | 2 | 2 | 2 | .. | 1 | 1 | 3 | .. | .. | 11 |
| Jaundice | 1 | 10 | 5 | .. | 6 | 5 | 3 | 1 | 6 | 1 | 38 |
| La Grippe | .. | 4 | 14 | 33 | 63 | 50 | 46 | 22 | 18 | 1 | 251 |
| Laryngitis | .. | 1 | .. | 2 | 1 | .. | 3 | 2 | 1 | .. | 10 |
| Malaria | 1 | 3 | .. | 1 | .. | 1 | 1 | .. | 3 | .. | 10 |
| Measles | .. | .. | 1 | .. | .. | 1 | 4 | 5 | 6 | 1 | 18 |
| Miscellaneous | 4 | 18 | 10 | 13 | 14 | 14 | 18 | 22 | 15 | 7 | 135 |
| Mumps | .. | 1 | .. | .. | 1 | 1 | 1 | 11 | 13 | 1 | 29 |
| Nephritis | .. | 2 | 2 | .. | 2 | 2 | .. | .. | .. | .. | 8 |
| Neuralgia | .. | 3 | 3 | 2 | 3 | .. | 1 | 1 | .. | .. | 13 |
| Pertussis | .. | .. | .. | .. | .. | 4 | 3 | 3 | .. | .. | 10 |
| Pharyngitis | 1 | 1 | 3 | 2 | 4 | 8 | 13 | 1 | 5 | .. | 38 |
| Pleuritis | .. | 1 | .. | 1 | 1 | .. | 1 | .. | 2 | 1 | 7 |
| Pneumonia | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 3 |
| Rheumatism | .. | 2 | 5 | 2 | 3 | 1 | 4 | 6 | 2 | 1 | 26 |
| Scarlet Fever | .. | 1 | .. | .. | 7 | .. | .. | .. | 1 | .. | 9 |
| Skin, of the | .. | 1 | 4 | 2 | 3 | 5 | 3 | 1 | .. | .. | 19 |
| Surgical | 3 | 41 | 43 | 31 | 24 | 40 | 40 | 44 | 18 | 10 | 294 |
| Teeth, of the | .. | 1 | 1 | 2 | 4 | 3 | 2 | 3 | 1 | .. | 17 |
| Tonsilitis | 2 | 6 | 11 | 13 | 13 | 16 | 25 | 15 | 30 | 2 | 133 |
| Tuberculosis | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 5 |
| Typhoid | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| Totals | 14 | 154 | 172 | 170 | 200 | 228 | 262 | 204 | 172 | 47 | 1623 |
| Visits | 6 | 130 | 231 | 165 | 198 | 211 | 199 | 178 | 172 | 99 | 1589 |
| Office consultations, medical | 21 | 136 | 253 | 247 | 274 | 302 | 431 | 270 | 273 | 121 | 2328 |
| Office consultations, surgical | 13 | 304 | 131 | 102 | 73 | 104 | 120 | 92 | 91 | 74 | 1104 |
| Total number of consultations | 40 | 570 | 615 | 514 | 545 | 617 | 750 | 540 | 536 | 294 | 5021 |

Cases not seen by the Medical Visitor . . . . . 547

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## TABLE II.

### Illness Report as Related to the different Schools.

| Diseases. | College. | | | | | Scientific. | | | | Law. | Graduate. | Divinity. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | Sp. | 1 | 2 | 3 | 4 | | | | |
| Appendicitis | 3 | 6 | 5 | 2 | 4 | .. | 1 | .. | .. | 4 | 2 | .. | 27 |
| Asthma | 1 | 5 | .. | 5 | .. | .. | .. | 1 | .. | .. | .. | .. | 12 |
| Bronchitis | 18 | 10 | 12 | 7 | 6 | 1 | 1 | .. | 1 | .. | .. | .. | 56 |
| Chicken-pox | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 7 |
| Colds, unclassified | 58 | 36 | 23 | 9 | 9 | 1 | 2 | 1 | .. | 8 | 6 | 1 | 154 |
| Coryza | 4 | 1 | 2 | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | 10 |
| Diarrhœa | 4 | 1 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 |
| Diphtheria | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 4 |
| Ear, of the | 7 | 7 | 5 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 23 |
| Eye, of the | 22 | 27 | 7 | .. | 7 | .. | .. | .. | .. | 2 | .. | .. | 65 |
| General Debility | 18 | 12 | 10 | 9 | 12 | .. | .. | .. | 1 | 6 | 5 | 2 | 75 |
| Headache | 5 | .. | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 9 |
| Heart, of the | .. | 1 | .. | .. | 3 | .. | .. | .. | .. | 1 | .. | .. | 5 |
| Indigestion | 19 | 20 | 9 | 5 | 9 | 2 | 1 | 2 | .. | 10 | 4 | .. | 81 |
| Insomnia | 2 | 3 | .. | 2 | 1 | .. | .. | .. | .. | 1 | 2 | .. | 11 |
| Jaundice | 13 | 11 | 8 | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | 38 |
| La Grippe | 60 | 71 | 36 | 27 | 15 | 4 | 2 | 3 | .. | 22 | 9 | 2 | 251 |
| Laryngitis | 3 | 1 | 2 | .. | 1 | .. | .. | 1 | 1 | 1 | .. | .. | 10 |
| Malaria | 2 | 5 | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 10 |
| Measles | 7 | 3 | 2 | 2 | .. | 1 | 1 | .. | .. | .. | 2 | .. | 18 |
| Miscellaneous | 30 | 38 | 19 | 10 | 14 | .. | 1 | 1 | .. | 16 | 5 | 1 | 135 |
| Mumps | 13 | 5 | .. | 1 | 3 | .. | .. | 1 | .. | 6 | .. | .. | 29 |
| Nephritis | 1 | 3 | 1 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | 8 |
| Neuralgia | 2 | 4 | 4 | .. | 2 | .. | .. | .. | .. | 1 | .. | .. | 13 |
| Pertussis | 4 | .. | 5 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 10 |
| Pharyngitis | 13 | 11 | 6 | 3 | 3 | .. | .. | .. | .. | 1 | 1 | .. | 38 |
| Pleuritis | 2 | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 7 |
| Pneumonia | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 |
| Rheumatism | 5 | 8 | 5 | 4 | 2 | .. | .. | .. | .. | 2 | .. | .. | 26 |
| Scarlet Fever | 2 | 3 | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 9 |
| Skin, of the | 2 | 4 | 4 | 2 | 2 | .. | .. | .. | .. | 3 | 1 | 1 | 19 |
| Surgical | 36 | 90 | 43 | 23 | 10 | 1 | 1 | .. | 2 | 33 | 5 | .. | 294 |
| Teeth, of the | 5 | 6 | 3 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 17 |
| Tonsilitis | 33 | 31 | 24 | 22 | 9 | 2 | 3 | 1 | 1 | 6 | 1 | .. | 133 |
| Tuberculosis | 2 | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | .. | 5 |
| Typhoid | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 3 |
| Totals | 450 | 427 | 245 | 151 | 123 | 12 | 14 | 13 | 6 | 128 | 47 | 7 | 1623 |
| No. of Students | 605 | 633 | 418 | 338 | 263 | 45 | 68 | 35 | 56 | 697 | 416 | 39 | |
| % of "Sign-offs" | 74 | 67 | 58 | 46 | 46 | 26 | 19 | 34 | 10 | 18 | 11 | 17 | |
| No. of Students cared for at Infirmary | 78 | 84 | 74 | 55 | 23 | 1 | 5 | 8 | 4 | 95 | 33 | 1 | |
| % of "Sign-offs" | 12 | 13 | 17 | 16 | 8 | 2 | 7 | 22 | 9 | 13 | 7 | 2 | |

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## TABLE III.

## STILLMAN INFIRMARY.

### List of Cases, 1906–07.

| | | | |
|---|---|---|---|
| Abscess peritonsillar | 8 | Measles | 9 |
| " miscellaneous | 11 | Miscellaneous Medical | 49 |
| Adenitis | 8 | " Surgical | 56 |
| Appendicitis | 22 | Mumps | 13 |
| Bronchitis | 12 | Nervous Exhaustion | 5 |
| Carbuncle | 2 | Otitis Media | 4 |
| Cerebro-spinal Meningitis | 1 | Peritonsilitis | 1 |
| Chicken-pox | 4 | Pertussis | 2 |
| Colds — unclassified | 35 | Pharyngitis | 4 |
| Concussion — cerebral | 6 | Pleuritis | 3 |
| Diphtheria | 2 | Pneumonia | 2 |
| Erysipelas — facial | 2 | Rheumatism | 12 |
| Fracture — tibia and Fibula | 1 | Scarlet Fever | 5 |
| Gastro enteritis | 6 | Sepsis | 18 |
| Hernia, double inguinal | 1 | Synovitis of knee | 11 |
| " left " | 1 | Tonsilitis | 41 |
| " right " | 1 | Tuberculosis — pulmonary | 1 |
| Jaundice | 8 | Typhoid Fever | 2 |
| La Grippe | 89 | No diagnosis | 11 |
| Laryngitis | 3 | | |
| Malaria | 5 | Total | 467 |

| | |
|---|---|
| Room patients | 99 |
| Ward patients | 368 |
| Total | 467 |

| | |
|---|---|
| Discharged — well | 311 |
| " relieved | 150 |
| " not relieved | 2 |
| " to Waverley | 1 |
| " to Rutland | 1 |
| " to Miss Copp's Hospital | 1 |
| Died | 1 |
| Total | 467 |

| | |
|---|---|
| Total number of hospital days | 3,274 |
| Daily average | 11.9 |

| | |
|---|---|
| Total number of operations | 65 |
| Operations for Appendicitis | 15 |

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## ORDINARY DEGREES CONFERRED, 1903–07.

| | 1903. | 1904. | 1905. | 1906. | 1907. |
|---|---|---|---|---|---|
| Bachelors of Arts | 511 | 459 | 427 | 374 | 448 |
| Bachelors of Arts out of course | 42 | 38 | 44 | 52 | 63 |
| Bachelors of Science | 101 | 77 | 91 | 62 | 79 |
| Bachelors of Science out of course | 5 | 7 | 16 | 13 | 17 |
| Bachelors of Divinity | 4 | 7 | 7 | 6 | 7 |
| Bachelors of Divinity out of course | 1 | 1 | 0 | 0 | 0 |
| Bachelors of Laws | 157 | 169 | 170 | 178 | 183 |
| Bachelors of Laws out of course | 6 | 13 | 13 | 13 | 23 |
| Bachelors of Agricultural Science | 6 | 3 | 1 | 2 | 6 |
| Bachelors of Agricultural Science out of course | 0 | 0 | 0 | 0 | 2 |
| Doctors of Medicine | 109 | 131 | 82 | 80 | 70 |
| Doctors of Medicine out of course | 3 | 4 | 2 | 1 | 0 |
| Doctors of Dental Medicine | 27 | 25 | 32 | 34 | 24 |
| Masters of Arts | 117 | 157 | 131 | 110 | 124 |
| Masters of Arts out of course | 8 | 5 | 12 | 4 | 8 |
| Masters of Science | 6 | 2 | 4 | 3 | 2 |
| Masters of Science out of course | 1 | 0 | 1 | 0 | 0 |
| Doctors of Philosophy | 28 | 46 | 39 | 46 | 33 |
| Doctors of Science | 1 | 1 | 0 | 0 | 1 |
| Metallurgical Engineer | 0 | 0 | 1 | 0 | 0 |
| Mining Engineer | 0 | 0 | 0 | 3 | 1 |
| Masters in Civil Engineering | 0 | 0 | 0 | 0 | 2 |
| Masters in Architecture | 0 | 0 | 0 | 0 | 2 |
| Master in Landscape Architecture | 0 | 0 | 0 | 0 | 1 |
| Masters in Forestry | 0 | 0 | 0 | 0 | 2 |
| Totals | 1133 | 1145 | 1073 | 981 | 1098 |

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# INDEX.


PAGE

Administrative Boards . . . . . 106, 126, 159
Admission, Report of the Chairman of the Committee on . . . . . 17, 349
Fees for examinations . . . . . 24
Local character of requirements for . . . . . 20, 361
Requirement in Elementary Latin for . . . . . 21, 350
Requirements in Greek for . . . . . 23
Subjects counting towards degree . . . . . 18, 105, 356
Uncertainties of admission examinations . . . . . 22
With conditions . . . . . 19, 358
Alumni Association . . . . . 10
Andover Theological Seminary . . . . . 54, 144
Appointments, Report of the Secretary for . . . . . 343
Appointments, Secretary for . . . . . 10–12
Arnold Arboretum, Report on . . . . . 43, 231
Athletic Sports, Report on . . . . . 117
Base-ball . . . . . 122
Branches of athletics . . . . . 122
Committee on, organization of . . . . . 30, 117
Equipment . . . . . 117
Exaggeration of . . . . . 31
Finances . . . . . 33, 118–122
Foot-ball . . . . . 34, 123
Legislation . . . . . 124
Reduction of intercollegiate contests . . . . . 32
Botanic Garden, Report on . . . . . 43, 227
Buckley Scholarships . . . . . 15
Bussey Institution, Report on . . . . . 189
Finances of . . . . . 41
Carnegie Foundation for the Advancement of Teaching . . . . . 7
Chemical Laboratory, Report on . . . . . 44, 284
Elections . . . . . 284–286
Classical Antiquities, Collection of, Report on . . . . . 315
Coolidge Scholarships . . . . . 13
Deans, new . . . . . 27
Deficit . . . . . 55
Degrees conferred, 1903–07 . . . . . 365
Votes relating to . . . . . 96
Dental School, Report on . . . . . 40, 183
Artificial palates . . . . . 185
Courses of instruction . . . . . 183
Crown and bridge work . . . . . 186
Fractured jaws . . . . . 185
Inlay work . . . . . 185
Loss of students . . . . . 188


Digitized by Google

PAGE

Dental School. — Concluded.
Mechanical Department . . . 185
Operative Department . . . 184
Orthodontia . . . 185
Registration statistics . . . 183
Summer course . . . 186
Divinity School, Report on . . . 144
Andover Theological Seminary . . . 54, 144
Courses of instruction . . . 148–151
Dean . . . 144
Graduates in the ministry . . . 35, 145
King's Chapel lectures . . . 145, 151
Library . . . 151
Statistics . . . 146–148
Statistics of graduates . . . 145
Summer School of Theology . . . 150
Endowed professorships . . . 38
Engineering, Division of, Report on . . . 44, 245
English College System . . . 53
Exchange of professors with Germany . . . 26
Faculty of Arts and Sciences, Report on . . . 57
Degrees, votes relating to . . . 96
Overseers' communication on instruction . . . 25, 98
Prizes, award of . . . 96
Teachers, Afternoon and Saturday Courses for . . . 95
Fay Scholarship . . . 13, 153
Fees, additional, for courses . . . 51
Fenn, William Wallace . . . 27
Fogg Art Museum, Report on . . . 48, 307
Folin, Otto . . . 39
Foot-ball . . . 33, 123
Foreign lecturers . . . 27
Geology and Geography, Department of, Report on . . . 47, 273
Germanic Museum, Report on . . . 311
Germany, exchange of professors with . . . 26
Grades, tardiness in returning . . . 28, 108
Graduate School of Applied Science . . . 30, 111
Degrees conferred . . . 116
Registration statistics . . . 111
Graduate School of Arts and Sciences, Report on . . . 34, 126
Administrative Board . . . 126
Birthplaces of students . . . 131
Colleges and universities represented . . . 130
Degrees conferred . . . 131
Divisions and Departments represented by degrees . . . 132
Doctors of Philosophy . . . 134–137
Entity of the School . . . 142
Fellowships and scholarships . . . 133, 138–140
Number and classification of students . . . 127
Percentage of students from other colleges . . . 128

Digitized by Google

PAGE
Graduate School of Arts and Sciences. — Concluded.
Percentage of students in their first and following years . . . . . 128
Requirements for degrees . . . . . 140
Resident Fellows . . . . . 138
Resident students doing full work, and non-resident students . . . . . 129
Gray Herbarium, Report on . . . . . 221
Bequest of Mrs. W. B. Potter . . . . . 43, 224
Harvard College, Report on . . . . . 27, 101
Administrative Board . . . . . 106
Admission subjects counting towards degree . . . . . 105
Grades, failure of teachers to return . . . . . 108
Losses and gains . . . . . 101
Scholarships with and without stipend . . . . . 109
Wells, Edgar H. . . . . 108
Hodges Scholarship . . . . . 15
Illness Report . . . . . 362
Jefferson Physical Laboratory, Report on . . . . . 242
Kühnemann, Eugen . . . . . 26
Langdell Scholarships . . . . . 153
Law School, Report on . . . . . 152
Courses of study . . . . . 154, 155
Portraits . . . . . 153
Registration statistics . . . . . 152
Scholarships . . . . . 13, 153
Lawrence Scientific School, Report on . . . . . 28, 111
Distribution of Scientific Students . . . . . 29, 112
Engineering courses . . . . . 116
Degrees conferred . . . . . 116
Graduate School of Applied Science . . . . . 111, 116
Registration statistics . . . . . 111–115
Library, Report on . . . . . 42, 190
Accessions . . . . . 198
Addition to . . . . . 42, 190–193, 195
Admission to the book-stack . . . . . 206
Catalogue department . . . . . 211–213, 218
Coins, collection of . . . . . 199
Evening hours . . . . . 208
Financial condition . . . . . 214–216
Gifts . . . . . 200–202
John Harvard, exhibitions of memorials of . . . . . 193
Loans of books . . . . . 207
Open reading-room collections . . . . . 206
Ordering department . . . . . 214–216
Shelf department . . . . . 209
Special reference libraries . . . . . 204
Staff . . . . . 217
Staff, need of increase in . . . . . 216
Sunday use of reading-room . . . . . 208
Purchases . . . . . 203
Use of books . . . . . 205

Digitized by Google

PAGE
Lyons, University of, arrangement with . . . . . 54
Medical School, Report on . . . . . 40, 159
Administrative Board . . . . . 159
Anatomy . . . . . 160
Bacteriology . . . . . 166
Biological Chemistry . . . . . 39, 164
Buildings . . . . . 159
Clinical Medicine . . . . . 39
Comparative Anatomy . . . . . 161
Comparative Pathology . . . . . 164, 167
Courses of instruction . . . . . 177
Degrees . . . . . 157, 179
Elective courses . . . . . 178
Endowed professorships . . . . . 38
Examination statistics . . . . . 180, 181
Finances . . . . . 36–38
Hygiene . . . . . 172
Libraries . . . . . 160
Museum . . . . . 173
Pathology . . . . . 166
Physiology . . . . . 163
Pharmacology and Therapeutics . . . . . 168
Proctor Fund . . . . . 174
Registration statistics . . . . . 38, 179
Scholarships and fellowships . . . . . 176
Summer courses . . . . . 179
Surgery and Clinical Surgery . . . . . 170
Theory and Practice . . . . . 168
Medicine, Faculty of, Report on . . . . . 36, 157
Memorial Hall . . . . . 49, 51
Mineralogical Museum and Laboratories of Mineralogy and Petrography, Report on . . . . . 290
Mining and Metallurgy, Report on . . . . . 47, 284
Museum of Comparative Zoölogy, Report on . . . . . 45, 262
Popular lectures at . . . . . 46
Observatory, Report on . . . . . 45, 253
Organization of the University, the Joint Committee on the, Report of . . . . . 6, 337
Overseers' communication on instruction . . . . . 98
Overseers, right to vote for . . . . . 6
Parker, Theodore . . . . . 151
Peabody, Francis Greenwood . . . . . 27, 144
Peabody Museum of American Archaeology and Ethnology, Report on . . . . . 47, 292
Potter, Sarah E. . . . . 43, 224
Prizes, award of . . . . . 97
Psychological Laboratory, Report on . . . . . 250
Radcliffe College, Report on . . . . . 332
Randall Hall . . . . . 50
Sabine, Wallace Clement . . . . . 27, 242

Digitized by Google

PAGE
Scholarships with and without stipend . . . . . 13–16, 109
Secretary of the Alumni Association . . . . . 10, 108
SEMITIC MUSEUM, Report on . . . . . 304
Shaler Memorial Fund . . . . . 9, 273
Skillen, James, Fund . . . . . 9
STILLMAN INFIRMARY . . . . . 48, 364
Strobel, Edward Henry . . . . . 36
SUMMER COURSES OF INSTRUCTION, Report on . . . . . 317
Tardiness in returning grades . . . . . 28, 108
Teachers, Afternoon and Saturday Courses for . . . . . 25, 95
Visiting Professor from Germany . . . . . 26
Ware, Henry, Jr. . . . . 151
Wells, Edgar H. . . . . 10, 108
Willard Scholarship . . . . . 14
WILLIAM BELDEN NOBLE LECTURES, Terms of . . . . . 8, 340
ZOÖLOGICAL LABORATORY, Report on . . . . . 267

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*HARVARD UNIVERSITY*

# TREASURER'S STATEMENT

## 1906-07

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# CONTENTS

## SUMMARIES.


Investments. PAGE

Rate of dividing income among Funds; bond premiums repaid from income; gains and losses by changes of investments . . . . . 5

Kinds, amounts and income . . . . . 6

Aid to students . . . . . 6

Changes in Funds . . . . . 7

Income and current expenses for Departments . . . . . 8


## GIFTS.


For capital . . . . . 17

For immediate use . . . . . 22


## CAPITAL.


Investments.

Total, including general investments in detail . . . . . 52

Special, of Funds invested separately . . . . . 57

Funds represented by the investments . . . . . 62


## TOTAL RECEIPTS AND PAYMENTS.

### RECEIPTS.


Income.

From securities . . . . . 34

" real estate investments . . . . . 40

" students . . . . . 42

Sundries . . . . . 44

Gifts for immediate use . . . . . 44

Exclusive of Income.

Gifts for capital . . . . . 46

Sales of investments.

General . . . . . 48

Special . . . . . 48

Sundries . . . . . 50


### PAYMENTS.


Total for each Department . . . . . 35

For investments.

General . . . . . 47

Special . . . . . 49

Sundries . . . . . 51


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## RECEIPTS AND PAYMENTS FOR DEPARTMENTS.


| Table. | | Page |
|---|---|---|
| I. | University (administration and general objects) | 79 |
| II. | College, including Lawrence Scientific School, Graduate School of Arts and Sciences, and Graduate School of Applied Science. | |
| | Receipts. | |
| | Gifts for capital | 83 |
| | Gifts for immediate use and income of Funds | 83 |
| | Receipts from students | 92 |
| | Sundries | 93 |
| | Payments. | |
| | Aid to students | 94 |
| | From gifts | 98 |
| | Summer Schools | 99 |
| | Salaries | 101 |
| | For public buildings | 101 |
| | For dormitories | 101 |
| | General expenses | 101 |
| III. | Library | 103 |
| IV. | Divinity School | 106 |
| V. | Law School | 108 |
| VI. | Medical School | 110 |
| VII. | Dental School | 116 |
| VIII. | **Bussey** Institution | 117 |
| IX. | **Arnold** Arboretum | 118 |
| X. | Botanic Garden and Botanical Museum | 119 |
| XI. | **Gray** Herbarium | 120 |
| XII. | Observatory | 121 |
| XIII. | Museum of Comparative Zoölogy | 122 |
| XIV. | **Peabody** Museum of American Archaeology and Ethnology | 123 |
| XV. | Semitic Museum | 124 |
| XVI. | Germanic Museum | 125 |
| XVII. | **William Hayes Fogg** Art Museum | 126 |
| XVIII. | **Jefferson** Physical Laboratory | 127 |
| XIX. | **Appleton** Chapel | 128 |
| XX. | **Phillips Brooks** House | 128 |
| XXI. | **Hemenway** Gymnasium | 129 |
| XXII. | **Stillman** Infirmary | 130 |
| XXIII. | Sundry Funds for Special Purposes | 131 |
| XXIV. | Construction Accounts | 132 |
| XXV. | Sundry Accounts | 133 |
| | Balanced Summary of the Tables | 136 |
| Certificate of the Auditing Committees of the Corporation and Overseers | | 137 |
| Index | | 139 |


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# TREASURER'S STATEMENT FOR 1906–07.

To the Board of Overseers of Harvard College: —

The Treasurer submits the annual statement of the financial affairs of the University, for the year ending July 31, 1907.

The net income of the general investments was divided at the rate of 4.91 per cent., except in the following cases, among the Funds and balances to which these investments belong. The exceptions are some temporary balances which were allowed lower rates of interest, and the balance called "Gains and Losses for General Investments," which, in accordance with the vote quoted below, was allowed no interest. The rate compared with that for 1905–06 shows an increase of 0.17 per cent. The income remaining after the above division, $1,099.17, is held for division with the income of the following year. Formerly such remainders were credited to the University account.

From the income of all bonds bought at a premium for general investments $8,943.72 was credited to the respective investment accounts, and for special investments $784.07, as the fair yearly repayment to make good the whole of the premiums at the maturity of the bonds.

The gains, amounting to $3,987.07, and the losses, amounting to $1,600.00, during the year, from the sale of securities held as general investments, were carried to "Gains and Losses for General Investments" in accordance with the following vote of the Corporation, of October 26, 1891: —

"*Voted*, that the sum of $23,341.97 being the net gain from sales of bonds at a profit, heretofore credited to the account of Railroad Bond Premiums, be transferred as of July 31, 1891, to a new account to be called 'Gains and Losses for General Investments,' which account shall be credited with all gains and charged with all losses hereafter arising from sales of property belonging to the general investments. As this account belongs pro rata to all the Funds sharing in general investments it is not to be allowed interest when its balance is on the credit side nor to be charged with interest when its balance is on the debit side."

Its credit balance July 31, 1907, was $601,356.70.

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The gains from the sale of property held as special investments, amounting to $118.75 during the year, and the losses amounting to $5.00, were carried to the accounts of the Funds the investments of which were sold.

Aid to students, in the form of fellowships, scholarships and loans, amounted during the year to $125,915.63.

## SUMMARY OF INVESTMENTS.

(For details, see pp. 52 and 57.)

| General Investments. | Principal, Aug. 1, 1906. | Principal, July 31, 1907. | Income. |
|---|---|---|---|
| Mortgages, Notes, &c., | $1,310,000.00 | $1,060,000.00 | $71,610.17 |
| Public Funds, | 108,584.55 | 106,584.55 | 4,727.02 |
| Railroad Bonds, | 5,147,001.67 | 5,388,335.47 | 211,575.25 |
| Traction Bonds, | 1,584,641.14 | 1,576,484.07 | 68,405.86 |
| Sundry Bonds, | 2,340,487.61 | 2,571,699.23 | 105,760.38 |
| Railroad Stocks, | 1,121,817.18 | 1,503,286.20 | 55,454.50 |
| Manufacturing and Telephone Stocks, | 473,062.77 | 407,585.41 | 25,574.00 |
| Real Estate Trust Stocks, | 695,421.60 | 695,421.60 | 25,936.50 |
| Sundry Stocks, | 132,107.00 | 233,169.50 | 6,000.00 |
| Real Estate, | 2,424,720.45 | 2,836,110.24 | 179,484.61 |
| Advances to Antitoxin Laboratory, | | 404.89 | .94 |
| **Bussey** Trust, | 345,217.07 | 348,227.21 | 13,939.10 |
| **Calvin & Lucy Ellis** Real Estate, | 345.31 | 402.02 | 17.27 |
| **William Hayes Fogg** Art Museum, | 93.68 | | 4.68 |
| **Emerson** Hall, | 3,368.81 | | |
| Dental School Real Estate, | 87.58 | 87.58 | |
| Medical School, | 5,553.39 | 6,373.03 | 277.67 |
| " " Real Estate, | 106.69 | | |
| " " Undertaking, | 1,183,526.43 | | 57,617.74 |
| Observatory, | 5,466.59 | 1,024.63 | 273.33 |
| **Peabody** Museum of American Archaeology and Ethnology, | 2,117.79 | 2,774.22 | 95.30 |
| Botanic Department, | 8,990.78 | 7,352.39 | 449.54 |
| **Harvard** Dining Association, | 180,792.13 | 173,295.30 | 8,161.77 |
| **Randall** Hall Association, | 31,202.27 | 29,702.27 | 1,560.12 |
| **Uriah A. Boyden** Fund, | 5,785.53 | 9,080.62 | |
| Classical Publication Fund of the **Class of 1856,** | 1,505.58 | 1,750.82 | 75.28 |
| Woodland Hill Fund, | 2,543.68 | 2,875.65 | 127.18 |
| Stadium, | 48,665.32 | 31,019.13 | 2,353.81 |
| Sundry Accounts, | 4,254.89 | 1,895.66 | |
| Term Bills overdue, | 50,966.46 | 58,858.99 | |
| Amounts carried forward, | $17,218,383.90 | $17,053,750.68 | $839,482.02 |

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## SUMMARY OF INVESTMENTS (*continued*).

| General Investments. | Principal, Aug. 1, 1906. | Principal, July 31, 1907. | Income. |
|---|---|---|---|
| Amounts brought forward, . . | $17,218,383.90 | $17,053,750.68 | $839,482.02 |
| Cash in City Trust Co., . . . . . | 40,342.41 | 80,132.02 | 1,483.86 |
| " Equitable Trust Co., . . . . | 3,311.42 | 697.65 | 972.60 |
| " Merchants National Bank, . | 10,483.64 | 908.71 | 147.14 |
| " National Shawmut Bank, . . | 180.52 | | |
| " National Union Bank, . . . | 1,517.37 | 1,547.29 | 29.92 |
| " Old Boston National Bank, . | 29,491.67 | 65,580.93 | 1,543.95 |
| " hands of Bursar, . . . . . | 40,518.71 | 30,232.67 | |
| **Totals, General Investments,** | $17,344,229.64 | $17,232,849.95 | $843,659.49 |
| **Special Investments** (p. 61), | 2,633,682.07 | 2,659,799.97 | 101,517.15 |
| **Totals of all investments,** . . | $19,977,911.71 | $19,892,649.92 | $945,176.64 |

## CHANGES IN FUNDS.

| | |
|---|---|
| Total of Funds and balances, August 1, 1906, . . . . . | $19,977,911.71 |
| " " " July 31, 1907, . . . . . | 19,892,649.92 |
| Decrease during the year, . . . . . | $85,261.79 |

### ANALYSIS OF DECREASE.

| | | |
|---|---|---|
| **Decrease of Funds and balances.** | | |
| Funds applied to the Medical School Undertaking, by payments towards land and construction (see pp. 132–135), . | | $551,820.66 |
| Law School balance, by payments towards construction of Langdell Hall, . . . . . | | 215,871.42 |
| Sundry balances spent, mainly of gifts for special purposes, | | 4,496.09 |
| Loss by changes of investments, . . . . . | | 1,605.00 |
| **Henry L. Pierce** (Residuary) Fund, by payment of the deficit in the combined accounts of the University, College and Library (see p. 9), . . . . . | | 16,713.64 |
| | | $790,506.81 |
| **Less increase, excluding gifts for capital.** | | |
| **Henry Francis Sears** Fund for Pathology established with part of the proceeds of Medical School property sold (see p. 110), . . . . . | $35,000.00 | |
| Net increase of Funds and balances which appear at both the beginning and the end of the year, excluding the Law School balance, Funds applied to the Medical School Undertaking and the **Henry L. Pierce** (Residuary) Fund, . | 91,858.44 | |
| Increase of Funds established during the year, . | 1,831.66 | |
| Credit balances created during the year, mainly of gifts for immediate use, . . . . . | 24,025.11 | |
| Gain by changes of investments, . . . . . | 4,105.82 | 156,821.03 |
| **Net decrease, excluding gifts for capital,** . . . . . | | $633,685.78 |
| **Less gifts for capital,** . . . . . | | 548,423.99 |
| **Decrease during the year,** . . . . . | | $85,261.79 |

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## INCOME AND CURRENT EXPENSES FOR DEPARTMENTS.

### SUMMARIES.

These tables show for each Department the receipts available for salaries, retiring allowances and general expenses, the amount of such expenses, and the resulting surplus, or deficit. They are summaries of only these general items in the more comprehensive and detailed tables beginning on page 79.

### THE UNIVERSITY.

(See Table No. I, page 79.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balances, | $62,548.68 | |
| Gifts, | 5,454.54 | |
| Rents, | 2,810.00 | |
| Sales and repayments, | 1,434.33 | $72,247.55 |

PAYMENTS.

| | | |
|---|---|---|
| Overseers' expenses, | $2,127.31 | |
| Office expenses, | 20,703.04 | |
| Salaries, | 44,829.09 | |
| Retiring allowances, | 25,462.48 | |
| Memorial Hall and Sanders Theatre, | 396.15 | |
| Peabody Museum of American Archaeology and Ethnology (part, see Table XIV, page 124), | 1,350.95 | |
| Semitic Museum (part, see Table XV, page 125), | 1,500.00 | |
| Germanic Museum (part, see Table XVI, page 125), | 75.32 | |
| William Hayes Fogg Art Museum (part, see Table XVII, page 126), | 2,927.08 | |
| Appleton Chapel (part, see Table XIX, page 128), | 6,361.22 | |
| Phillips Brooks House (part, see Table XX, page 129), | 1,857.02 | |
| General expenses, | 35,575.82 | 143,165.48 |
| Deficit, excluding payment for Emerson Hall, | | $70,917.93 |
| Emerson Hall, cost of construction in excess of gifts, | | 3,368.81 |
| Deficit, | | $74,286.74 |

### THE COLLEGE, INCLUDING THE LAWRENCE SCIENTIFIC SCHOOL, THE GRADUATE SCHOOL OF ARTS AND SCIENCES, AND THE GRADUATE SCHOOL OF APPLIED SCIENCE.

(See Table No. II, page 83.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balances, | $231,007.64 | |
| Gifts, | 3,020.60 | |
| Sales, | 3,944.65 | |
| Insurance and unspent appropriations, | 405.30 | |
| Receipts from students (except tuition fees in the School for Social Workers and Gymnasium locker fees), | 601,654.66 | |
| Sundry receipts at the summer camp at Squam Lake, | 9,039.16 | |
| Amount available for expenses, carried forward, | | $849,072.01 |

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THE COLLEGE, CONTINUED.

| | | |
|---|---|---|
| Amount available for expenses, brought forward, . . . | | $849,072.01 |

PAYMENTS.

| | | |
|---|---|---|
| Salaries for instruction, . . . . . | $523,572.76 | |
| Salaries for administration, . . . . . | 15,733.33 | |
| Appropriations, . . . . . | 41,939.48 | |
| Scholarships from unrestricted income, . . . . . | 4,440.00 | |
| Expenses on account of public buildings, . . . . . | 30,026.89 | |
| Expenses on account of dormitories, . . . . . | 42,150.21 | |
| Summer Schools, . . . . . | 34,382.24 | |
| Museum of Comp. Zoölogy (part, see Table XIII, p. 123), | 4,227.00 | |
| Jefferson Physical Lab. (part, see Table XVIII, p. 127), | 665.96 | |
| Hemenway Gymnasium (part, see Table XXI, p. 130), . | 6,749.90 | |
| General expenses, . . . . . | 71,341.17 | 775,228.94 |
| Surplus, . . . . . | | $73,843.07 |

## THE LIBRARY.

(See Table No. III, page 103.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balances, . . . . . | $32,387.87 | |
| Gifts, . . . . . | 1,453.00 | |
| Fees, . . . . . | 90.00 | |
| Sales, . . . . . | 3.43 | $33,934.30 |

PAYMENTS.

| | | |
|---|---|---|
| Salaries, . . . . . | $18,900.00 | |
| Services, cataloguing, administration, etc., . . . . . | 19,758.39 | |
| Services in Department Libraries, . . . . . | 1,225.75 | |
| General expenses, . . . . . | 10,320.13 | 50,204.27 |
| Deficit, . . . . . | | $16,269.97 |

## UNIVERSITY, COLLEGE, AND LIBRARY.

COMBINED ACCOUNTS.

| | |
|---|---|
| University deficit as above, . . . . . | $74,286.74 |
| Library " " . . . . . | 16,269.97 |
| | $90,556.71 |
| College surplus as above, . . . . . | 73,843.07 |
| Deficit in the combined accounts, which was paid by principal from the Henry L. Pierce (Residuary) Fund, . . . . . | $16,713.64 |
| In 1905–06 there was a deficit of . . . . . | $59,296.31 |
| Principal of the Henry L. Pierce (Residuary) Fund, July 31, 1907, | $161,470.07 |

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## DIVINITY SCHOOL.

(See Table No. IV, page 106.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balances, | $25,311.60 | |
| Gifts, | 1,451.07 | |
| Sales, | 65.05 | |
| Receipts from students, | 9,977.45 | |
| Sundries, | 120.00 | $36,925.17 |

PAYMENTS.

| | | |
|---|---|---|
| Salaries for instruction, | $28,346.59 | |
| Salaries for administration, | 1,750.00 | |
| Books, | 389.07 | |
| General expenses, | 6,542.31 | 37,027.97 |
| Deficit, | | $102.80 |
| In 1905–06 there was a deficit of | $4,722.73 | |
| The Divinity School credit balance on July 31, 1907, was | $6,261.20 | |

## LAW SCHOOL.

(See Table No. V, page 108.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balances, | $27,896.75 | |
| Sales, | 6.50 | |
| Receipts from students, | 102,880.00 | $130,783.25 |

PAYMENTS.

| | | |
|---|---|---|
| Langdell Hall, construction, | $246,417.40 | |
| Salaries for instruction, | 53,475.00 | |
| Salaries for administration, | 11,811.91 | |
| Scholarships from unrestricted income, | 5,250.00 | |
| Books, | 14,670.83 | |
| General expenses, | 14,444.19 | 346,069.33 |
| Deficit, caused by the payment of $246,417.40 towards the cost of Langdell Hall, from accumulated and current income, | | $215,286.08 |
| Otherwise there would have been a surplus of | $31,131.32 | |
| In 1905–06, after the payment of $16,530.25 towards the cost of Langdell Hall, from current income, there was a surplus of | $24,834.78 | |
| Otherwise there would have been a surplus of | $41,365.03 | |
| The Law School credit balance on July 31, 1907, was | $132,456.87 | |

## MEDICAL SCHOOL.

(See Table No. VI, page 110.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balances, | $92,300.87 | |
| Gifts, | 4,850.00 | |
| Receipts from students, | 72,924.07 | |
| Sales, | 2,297.87 | |
| Repayments, | 1,651.72 | $174,024.53 |
| Amount available for expenses, carried forward, | | $174,024.53 |

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MEDICAL SCHOOL, CONTINUED.

| | | |
|---|---|---|
| Amount available for expenses, brought forward, . . . | | $174,024.53 |
| PAYMENTS. | | |
| Salaries for instruction, . . . . . | $102,625.66 | |
| Salaries for administration, . . . . . | 1,870.13 | |
| Retiring allowance, . . . . . | 1,000.00 | |
| Appropriations, . . . . . | 18,069.87 | |
| General expenses, . . . . . | 51,278.51 | 174,844.17 |
| Deficit, . . . . . | | $819.64 |
| In 1905–06 there was a deficit of . . . . . | $11,113.96 | |
| The Medical School debit balance on July 31, 1907, was | $6,373.03 | |

## DENTAL SCHOOL.

(See Table No. VII, page 116.)

| | | |
|---|---|---|
| AVAILABLE FOR EXPENSES. | | |
| Income of Funds and balances, . . . . . | $1,927.86 | |
| Fees from Infirmary, . . . . . | 4,809.25 | |
| Sales, . . . . . | 462.96 | |
| Receipts from students, . . . . . | 12,153.54 | $19,353.61 |
| PAYMENTS. | | |
| Salaries for instruction, . . . . . | $5,437.50 | |
| Salaries for administration, . . . . . | 700.00 | |
| General expenses, . . . . . | 11,978.55 | 18,116.05 |
| Surplus, . . . . . | | $1,237.56 |
| In 1905–06 there was a surplus of . . . . . | $1,611.38 | |
| The Dental School credit balance on July 31, 1907, was | $14,195.67 | |

## BUSSEY INSTITUTION.

(See Table No. VIII, page 117.)

| | | |
|---|---|---|
| AVAILABLE FOR EXPENSES. | | |
| Income of Funds and balances, . . . . . | $6,856.97 | |
| Rents, . . . . . | 1,335.00 | |
| Sales, . . . . . | 104.42 | |
| Board of animals, . . . . . | 5,491.26 | |
| Horticultural Department receipts, . . . . . | 1,757.51 | |
| Receipts from students, . . . . . | 4,875.00 | $20,420.16 |
| PAYMENTS. | | |
| Salaries for instruction, . . . . . | $8,400.00 | |
| Horticultural Department expenses, . . . . . | 2,202.78 | |
| General expenses, . . . . . | 7,912.79 | 18,515.57 |
| Surplus, . . . . . | | $1,904.59 |
| In 1905–06 there was a surplus of . . . . . | $1,682.65 | |
| The Bussey Institution credit balance on July 31, 1907, was | $30,731.07 | |

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## ARNOLD ARBORETUM.

(See Table No. IX, page 118.)

### Available for Expenses.

| | | |
|---|---|---|
| Income of Funds and balance, | | $16,050.98 |
| Gifts, | | 2,973.80 |
| Sales, | | 1,884.25 |
| Rent, | | 120.00 $20,978.98 |

### Payments.

| | | |
|---|---|---|
| Salaries, | $4,950.00 | |
| General expenses, | 20,414.08 | 25,364.08 |
| Deficit, | | $4,385.10 |

| | |
|---|---|
| In 1905–06 there was a surplus (from gifts) of | $479.34 |
| The Arboretum Construction Gifts credit balance on July 31, 1907, was | $25,000.05 |

## BOTANIC GARDEN AND BOTANICAL MUSEUM.

(See Table No. X, page 119.)

### Available for Expenses.

| | | |
|---|---|---|
| Income of Funds, | | $4,516.10 |
| Gifts, | | 5,177.90 |
| Rent, | | 700.00 |
| Sales, | | 500.00 |
| From laboratory fees, | | 374.63 $11,268.63 |

### Payments.

| | | |
|---|---|---|
| Interest on debt, | $449.54 | |
| General expenses, | 9,180.70 | 9,630.24 |
| Surplus, | | $1,638.39 |

| | |
|---|---|
| In 1905–06 there was a deficit of | $902.67 |
| The debt of the Botanic Garden and Botanical Museum on July 31, 1907, was | $7,352.39 |

## GRAY HERBARIUM.

(See Table No. XI, page 120.)

### Available for Expenses.

| | | |
|---|---|---|
| Income of Funds and balance, | | $3,715.80 |
| Asa Gray's copyrights, | | 814.29 |
| Gifts, | | 3,223.44 |
| Sales and commissions, | | 2,279.44 $10,032.47 |

### Payments.

| | | |
|---|---|---|
| Salaries, | $4,450.00 | |
| General expenses, | 7,038.70 | 11,488.70 |
| Deficit, | | $1,456.23 |

| | |
|---|---|
| In 1905–06 there was a surplus of | $852.31 |
| The Gray Herbarium credit balance on July 31, 1907, was | $278.47 |

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## OBSERVATORY.

(See Table No. XII, page 121.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds, | $33,152.40 | |
| Gifts, | 10,413.04 | |
| Rent, | 600.00 | |
| Sales, etc., | 90.09 | |
| Insurance awarded for loss by fire, | 112.00 | $44,367.53 |

PAYMENTS.

| | | |
|---|---|---|
| Salaries, | $18,000.00 | |
| Services, | 7,774.32 | |
| Interest on debt, | 273.33 | |
| General expenses, | 13,877.92 | 39,925.57 |
| Surplus, | | $4,441.96 |

In 1905–06 there was neither a surplus nor a deficit.

The debt of the Observatory on July 31, 1907, was . . . $1,024.63

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## MUSEUM OF COMPARATIVE ZOÖLOGY.

(See Table No. XIII, page 122.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balance, | $30,513.30 | |
| Use of lecture room, | 700.00 | $31,213.30 |

PAYMENTS.

| | | |
|---|---|---|
| Salaries, | $11,100.00 | |
| General expenses, | 27,980.69 | |
| | $39,080.69 | |
| Less the amount which was paid from College income (see Table No. II, page 99), | 4,227.00 | 34,853.69 |
| Deficit, | | $3,640.39 |

In 1905–06 there was a surplus of . . . . . $3,408.20

The Museum of Comparative Zoölogy credit balance on July 31, 1907, was . . . . . $32,074.13

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## PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY.

(See Table No. XIV, page 123.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds, | $6,485.68 | |
| Gifts, | 1,110.00 | |
| Use of heating plant, | 75.00 | |
| Library fines and lost books, | 1.60 | $7,672.28 |

PAYMENTS.

| | | |
|---|---|---|
| Salary of Peabody Professor and Curator, | $2,871.54 | |
| Interest on debt, | 95.30 | |
| General expenses, | 7,212.82 | |
| | $9,679.66 | |
| Less the amount which was paid from University income (see Table No. I, page 81), | 1,350.95 | 8,328.71 |
| Deficit, | | $656.43 |
| In 1905–06 there was a deficit of | $136.75 | |
| The debt of the Peabody Museum of American Archaeology and Ethnology on July 31, 1907, was | $2,774.22 | |

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## SEMITIC MUSEUM.

(See Table No. XV, page 124.)

AVAILABLE FOR EXPENSES, Nothing.

PAYMENTS.

| | |
|---|---|
| Salary of Curator, | $500.00 |
| General expenses, | 1,000.00 |
| Deficit, which was paid from University income (see Table No. I, page 81), | $1,500.00 |
| In 1905–06 there was a deficit of | $1,778.82 |

---

## GERMANIC MUSEUM.

(See Table No. XVI, page 125.)

AVAILABLE FOR EXPENSES.

| | |
|---|---|
| Income of Funds, | $1,133.52 |

PAYMENTS.

| | |
|---|---|
| General expenses, | $1,208.84 |
| Deficit, which was paid from University income (see Table No. I, page 81), | $75.32 |
| In 1905–06 there was a deficit of | $332.72 |

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## WILLIAM HAYES FOGG ART MUSEUM.

(See Table No. XVII, page 126.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balance, | $2,541.96 | |
| Sales, etc. | 127.43 | $2,669.39 |

PAYMENTS.

| | | |
|---|---|---|
| Salary of Curator, | $500.00 | |
| General expenses, | 4,892.24 | |
| Interest on debt, | 4.68 | |
| | $5,396.92 | |
| Less the amount which was paid from University income (see Table No. I, page 81), | 2,927.08 | 2,469.84 |
| Surplus, | | $199.55 |
| In 1905–06 there was a deficit of | $568.87 | |
| The William Hayes Fogg Art Museum credit balance on July 31, 1907, was | $105.87 | |

## JEFFERSON PHYSICAL LABORATORY.

(See Table No. XVIII, page 127.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balance, | | $3,777.51 |

PAYMENTS.

| | | |
|---|---|---|
| General expenses, | $4,511.24 | |
| Less the amount which was paid from College income (see Table No. II, page 99), | 665.96 | 3,845.28 |
| Deficit, | | $67.77 |
| In 1905–06 there was a deficit of | $152.51 | |
| The Jefferson Physical Laboratory credit balance on July 31, 1907, was | $1,866.76 | |

## APPLETON CHAPEL.

(See Table No. XIX, page 128.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds, | | $2,505.77 |

PAYMENTS.

| | | |
|---|---|---|
| Preaching and morning services, | $3,218.80 | |
| Salaries of administrator, organist, and choir-master, | 2,200.00 | |
| General expenses, | 3,448.19 | 8,866.99 |
| Deficit, which was paid from University income (see Table No. 1, page 81), | | $6,361.22 |
| In 1905–06 there was a deficit of | $6,412.53 | |

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## PHILLIPS BROOKS HOUSE.

(See Table No. XX, page 128.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds, | $1,862.53 | |
| Gift, | 25.00 | $1,887.53 |
| PAYMENTS. | | |
| Salary of Secretary, | $600.00 | |
| General expenses, | 3,144.55 | 3,744.55 |
| Deficit, which was paid from University income (see Table No. I, page 81), | | $1,857.02 |
| In 1905–06 there was a deficit of | $1,829.41 | |

## HEMENWAY GYMNASIUM.

(See Table No. XXI, page 129.)

AVAILABLE FOR EXPENSES.

| | | | |
|---|---|---|---|
| Fees for the use of the Gymnasium, | | $98.38 | |
| Fees for the use of Gymnasium lockers, | | 2,418.00 | $2,516.38 |
| PAYMENTS. | | | |
| Salaries, | | $5,000.00 | |
| General expenses, | | 6,020.68 | |
| | | $11,020.68 | |
| Less the following items: — | | | |
| Amount paid from Divinity School income (see Table No. IV, page 108), | $87.04 | | |
| Amount paid from Law School income (see Table No. V, page 110), | 1,667.36 | 1,754.40 | 9,266.28 |
| Deficit, which was paid from College income (see Table No. II, page 99), | | | $6,749.90 |
| In 1905–06 there was a deficit of | | $6,306.40 | |

## STILLMAN INFIRMARY.

(See Table No. XXII, page 130.)

AVAILABLE FOR EXPENSES.

| | | |
|---|---|---|
| Income of Funds and balances, | $4,523.53 | |
| Annual fees, | 14,308.00 | |
| Receipts from patients, | 4,682.52 | $23,514.05 |
| PAYMENTS. | | |
| Services — administration, nursing, etc., | $5,440.81 | |
| Other expenses, | 13,242.27 | 18,683.08 |
| Surplus, | | $4,830.97 |
| In 1905–06 there was a surplus of | $2,934.82 | |

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## GIFTS FOR CAPITAL

### ESTABLISHING NEW FUNDS OR INCREASING OLD ONES.

From an anonymous giver, $5,000, to establish the "Samuel Phillips Prescott Fay, 1798, Fund and Scholarship" in the Law School. The income is to provide a diploma in memory of Jonathan and Samuel Phillips Prescott Fay for that member of the graduating class each year who during his three years' course has shown greatest ability; and to provide assistance to a worthy student who has finished at least one full year's course.

For the Arnold Arboretum Fund, from

| | |
|---|---|
| Massachusetts Society for Promoting Agriculture | $500 |
| B. F. Keith | 110 |
| Henry P. Curtis | 10 |
| Robert H. Gardiner | 25 |
| A. Shuman | 100 |
| | $745 |

From the estate of John Bartlett, Cambridge, Mass., $10,000, bequeathed in the name of his wife, Hannah Staniford Willard, "to the Corporation of Harvard University, to endow a 'Willard Scholarship' in memory of Samuel Willard, Vice President of said University, her ancestor, and of Joseph Willard, President, her grandfather, and of all his descendants graduates of Harvard."

From Mrs. Arthur W. Blake, $500, to be added to the F. B. Greenough Fund for Surgical Research.

Toward the Centennial Fund for the Botanic Garden, from

| | | | |
|---|---|---|---|
| Edwin H. Abbot | $50 | Amount brought forward | $500 |
| Mrs. James H. Beal | 100 | Mrs. W. S. Fitz | 100 |
| Miss M. L. Blake | 100 | Miss E. F. Mason | 100 |
| Mrs. S. P. Blake | 150 | Miss Marian Russell | 50 |
| Miss G. G. Eaton | 100 | Mrs. R. S. Russell | 100 |
| Amount carried forward | $500 | | $850 |

From the estate of Martin Brimmer, Boston, Mass., $50,000, bequeathed without restrictions "to the President and Fellows of Harvard College."

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From Arthur T. Cabot, Samuel Cabot, and Guy C. Cabot, $6,000, to establish the James Jackson Cabot Fund in the Medical School. The income remaining after adding a certain percentage to the principal each year is preferably, but not necessarily, to be used for a scholarship "to aid and encourage practical work in scientific medicine."

From William R. Castle, securities valued at $1,000, the income to be used, first, for the purchase of books on the Hawaiian or Sandwich Islands, and second, for additions to the English department of the Library, or, failing these uses, for such other purposes as the President and Fellows shall determine.

From members of the Class of 1881, $10,596.43, to be added to the "Twenty-fifth Anniversary Fund of the Class of 1881."

From members of the Class of 1882, on the twenty-fifth anniversary of their graduation, $53,863.36, which, with the additional gifts pledged, increasing it to $100,000, shall be known as the Fund of the Class of 1882. The use of the income is unrestricted.

From Mrs. William Leander Coolidge, William Henry Coolidge, and Louis Arthur Coolidge, securities valued at $9,000, to establish the Edward Erwin Coolidge Fund. The income is "without restriction of any kind," but is preferably "to be loaned, not given, to any student or students of Harvard University."

From the estate of Robert Henry Eddy, Boston, Mass., $1.00 additional, the remainder of his unrestricted residuary bequest.

From the late Manning F. Force, Cincinnati, Ohio, through the estate of Horace Gray, Boston, Mass., $20 to be added to the Class Subscription Fund.

Toward the foundation of a Chair in German Language and Literature, from

| | |
|---|---|
| William Denman | $250 |
| Hugo Reisinger | 100 |
| | $350 |

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From the estate of Edwin A. W. Harlow, Wollaston, Mass., his bequest of $9,285.48 "for assisting poor young men of excellent moral character in the Academic Department."

From friends and associates of the late Dr. John Homans, '58, of Boston, Mass., $50,000, to establish the John Homans Professorship in the Medical School.

From Francis D. Lecompte, $50,000, to establish the Walter Augustus Lecompte Professorship of Otology in the Medical School. Any surplus of income is to be devoted to the Department of Otology.

Through the Harvard Medical Alumni Association, $2,430, to establish the Harvard Medical Alumni Fund, the income of which is to be added to the principal, or applied to increase the salary of one or more of the younger instructors in the Medical School, or otherwise, in accordance with the wishes of the Association.

To establish the Newsboys' Harvard Scholarship, the income of which is to be awarded, for the student's first year only, to that one of the newsboys eligible to compete who passes the Harvard admission examinations with the highest rank, from

| | |
|---|---|
| Miss Grace Edwards . . . . . | $100.00 |
| The Boston Newsboys' Protective Union . . . | 2,567.16 |
| | $2,667.16 |

From the estate of Lyman Nichols, Nahant, Mass., $10,000, for the benefit of the Medical School.

From the Committee which collected the money from the subscribers, $454.92, to be added to the book fund in honor of Professor Charles Eliot Norton, the income thereof to be "devoted to the purchase of such books as Professor Norton may suggest."

From the estate of Mrs. W. B. Potter, Boston, Mass., $50,000 and securities valued at $165, "to be used and applied in connection with the Gray Herbarium and to be called 'The Sarah E. Potter Endowment Fund.'"

From Milton Reed, securities valued at $4,000, to establish a scholarship, in memory of his father, William Reed (born

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at Newburyport, Mass., March 27, 1818; died at Fall River, Mass., November 7, 1894).

From two anonymous givers, $25,000, to be added, under stated conditions, to the Nelson Robinson, Jr., Fund.

From the estate of Stephen Salisbury, Worcester, Mass., $5,120, his bequest, with interest, to "Harvard College Library."

From Frederick Le Roy Sargent, $50, to be added to the Francis James Child Memorial Fund.

From more than seven hundred and sixty alumni of Harvard University, $32,238.23, as a fund "in commemoration of the long services of Professor Nathaniel Southgate Shaler, and of the great affection in which he was held by his many students and friends," with the provisions, that a memorial tablet be erected with part of the gift, and that the income of the remainder be used under stated conditions "for the benefit of the Division of Geology in support of original research and in the publication of the results of research."

From many friends of James Skillen, $10,857.39, through Reginald H. Fitz, J. Collins Warren, Herbert L. Burrell, Francis B. Harrington, Samuel J. Mixter, G. W. W. Brewster, Committee, establishing the James Skillen Memorial Fund, to secure James Skillen and Susan Skillen, his wife, an annuity during their lives; and at the death of the survivor to become one of the permanent unrestricted endowments of the Harvard Medical School.

From the estate of George Smith, St. Louis, Mo., $1,981.02 additional. The entire bequest, after accumulating to $450,000, is for building three dormitories to be named James Smith Hall, Persis Smith Hall, and George Smith Hall.

For the Teachers' Endowment Fund, $89,269 additional, from previous contributors.

From the estate of Jerome Wheelock, Worcester, Mass., $10, the fourth payment of that amount for establishing the Jerome Wheelock Fund of $100,000.

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From Mrs. Edward Wigglesworth, Mrs. Henry S. Grew, Mrs. Henry Pickering, Mrs. W. Scott Fitz, Mrs. Alexander S. Porter, Jr., George Wigglesworth, and Edward Wigglesworth, $50,000, to establish the Edward Wigglesworth Professorship of Dermatology in the Medical School in memory of the late Edward Wigglesworth, M.D.

For addition to the Emperor William Fund, established in 1905–06, celebrating the twenty-fifth anniversary of His Majesty's wedding; the income being for the maintenance of the Germanic Museum; from

| | | | |
|---|---|---|---|
| Anonymous | $600 | Amount brought forward | $5,500 |
| Anonymous | 350 | Henry W. Putnam | 50 |
| Adolphus Busch | 2,000 | William L. Putnam | 50 |
| H. L. Clark | 100 | A. C. Ratshesky | 50 |
| H. Albert Gehring | 200 | Miss Elise Richards | 10 |
| Germanic Museum Association | 350 | Jacob H. Schiff | 1,000 |
| Paul Heine | 500 | William Taussig | 185 |
| Henry L. Higginson | 1,000 | Miss Mary L. Ware | 50 |
| George V. Leverett | 200 | Moses Williams | 25 |
| Francis G. Peabody | 100 | Robert W. Willson | 50 |
| George Putnam | 100 | | $6,970 |
| Amount carried forward | $5,500 | | |

*The total amount of these gifts for capital account is $548,423.99, as stated also on page 46.*

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## GIFTS FOR IMMEDIATE USE.

From an anonymous giver, $25, for the Division of Anthropology.

From Miss Abby A. Bradley, $600, to be added to the income of the William L. Bradley Fund for the Arnold Arboretum.

From Charles Allerton Coolidge, $400, to be added to the appropriation for the Department of Architecture.

From Gardiner M. Lane, $1,000, his third gift of this amount for lectures to be given under the auspices of the Department of the Classics by some well known scholar or literary man from abroad.

From Henry L. Shattuck, $50, toward meeting the general expenses of undergraduate instruction in Harvard College.

From Edwin H. Abbot, $400, in accordance with the terms of his letter of gift, to be added to the income of the Teachers' Endowment Fund.

From an anonymous giver, $1,125, to be added to income used for salaries.

From the Carnegie Foundation for the Advancement of Teaching, $5,454.54, to pay the retiring allowances granted by the Executive Committee of this Foundation to persons connected with Harvard University.

From two anonymous givers, $2,500 additional, towards furnishing Emerson Hall.

From Mrs. Emil C. Hammer, $500, for furnishing the "Common Rooms" in Conant Hall.

From Henry L. Higginson, $200 toward the cost of equipment for "Latin 10."

From James Loeb, $1,000, for the purchase of seventeen drawings in lead pencil by Turner, for the Fogg Art Museum.

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Towards the addition to Gore Hall, from

| | | | |
|---|---|---|---|
| C. W. Amory | $100.00 | Amount brought forward | $6,166.33 |
| Mrs. E. D. Brandegee | 250.00 | Gardiner M. Lane | 566.67 |
| Shepherd Brooks | 500.00 | James Loeb | 5,000.00 |
| I. Tucker Burr | 100.00 | Charles Lanier | 1,000.00 |
| Committee of the Overseers to visit the Library | 4,466.33 | George F. Parkman | 500.00 |
| W. H. Coolidge | 250.00 | Mrs. G. H. Shaw | 500.00 |
| Frederick P. Fish | 250.00 | Francis Shaw | 500.00 |
| D. P. Kimball | 250.00 | Charles C. Smith | 100.00 |
| | | S. D. Warren | 667.00 |
| Amount carried forward | $6,166.33 | | $15,000.00 |

For the use of the Division of Music, from

| | | | |
|---|---|---|---|
| Percy L. Atherton | $10 | Amount brought forward | $55 |
| William P. Blake | 5 | Arthur Foote | 30 |
| F. S. Converse | 10 | Charles Peabody | 10 |
| Edward S. Dodge | 20 | Philip L. Spalding | 45 |
| William G. Farlow | 10 | | $140 |
| Amount carried forward | $55 | | |

From John E. Thayer, $500, for the Bermuda Biological Station for Research.

From R. L. Agassiz, W. E. C. Eustis, and George P. Gardner, $460, for the purchase of a seismograph for the Geological Department.

From R. L. Agassiz, $225, for the construction of the fireproof enclosure and the foundation for the seismograph to be erected in the Geological Section of the University Museum.

From an anonymous giver, $1,381.95, for the advancement of research in Physics.

From Mrs. M. Carey Lea, $100, to be added to the income of the Joseph Lovering Fund for Physical Research.

From Theodore Lyman, $150, for the salary of an Assistant in Physics.

From Joseph Lee, $500, for the School for Social Workers.

From Donald Gordon, $652, repayment, with interest, of scholarships which he received as a student in Harvard College.

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From Philippe Belknap Marcou, $50, for a prize for French composition, to be called the Jeremy Belknap Prize, as a memorial to Dr. Jeremy Belknap of the Class of 1762.

Towards the travelling expenses and support at Harvard University of Chinese students in addition to the sixteen students sent by the Chinese Government in 1906–07, from

| | |
|---|---|
| Mrs. T. J. Bowlker | $1,000 |
| Henry L. Higginson | 500 |
| Miss Ellen F. Mason | 1,000 |
| | $2,500 |

From an anonymous giver, $350, for the Ricardo Prize Scholarship for 1907–08.

From an anonymous giver, $100, to be used as the income of Scholarship Funds is used.

From an anonymous giver, $500, for two Scholarships in the Department of Education.

From an anonymous giver, $200, for the benefit of a student in the Graduate School of Arts and Sciences in 1907–08.

From Mrs. C. M. Barnard, $600, her twenty-fourth yearly gift for the Warren H. Cudworth Scholarships.

From the Harvard Club of Buffalo, $200, for the Scholarship of the Harvard Club of Buffalo for 1906–07.

From the Harvard Club of Chicago, $300, for the Scholarship of the Harvard Club of Chicago for 1906–07.

From the Harvard Club of Louisiana, $208.51, for the Scholarship of the Harvard Club of Louisiana for 1906–07.

From the Harvard Club of St. Louis, $300, for the Scholarship of the Harvard Club of St. Louis for 1906–07.

From the Lawrence Scientific School Association, $150, for a Scholarship in Engineering in the summer of 1907.

From James H. Hyde, $600, for the Fellowship of the Cercle Français de l'Université Harvard for 1906–07.

From the Boston Newsboys' Protective Union, $50, to be added to the income of the Newsboys' Scholarship, so that the

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holder in 1906–07 might receive the full annual stipend of $150.

For the South End House Fellowship, from

| | |
|---|---|
| Julian L. Coolidge | $100 |
| Edward W. Grew | 25 |
| Randolph C. Grew | 100 |
| Edward J. Holmes | 100 |
| John F. Moors | 25 |
| | $350 |

From Howard P. Arnold, $50, for the benefit of the Library.

For the purchase of books on the following subjects for the College Library, from

| | |
|---|---|
| WITHOUT RESTRICTION. | |
| Saturday Club, Boston, Mass. | $1,000.00 |
| Alain C. White | 250.00 |
| ENGLISH HISTORY IN THE SEVENTEENTH CENTURY. | |
| Charles Francis Adams | 50.00 |
| Arthur T. Lyman | 25.00 |
| Mrs. Daniel Merriman | 50.00 |
| William G. Peckham | 100.00 |
| William Woodward | 25.00 |
| DUTCH HISTORY, FOR THE JOHN LOTHROP MOTLEY COLLECTION. | |
| Anonymous | 50.00 |
| FRENCH HISTORY, GERMAN HISTORY, MOROCCO, TURKEY, ETC. | |
| Archibald Cary Coolidge | 250.00 |
| ENGLISH LITERATURE AND HISTORY. | |
| Ernest Blaney Dane | 5,000.00 |
| ENGLISH LITERATURE OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES. | |
| Frank Graham Thomson | 200.00 |
| Edgar H. Wells | 53.48 |
| "THE SPECTATOR," A SET OF THE ORIGINAL NUMBERS. | |
| W. R. Castle, Jr. | 62.50 |
| G. L. Kittredge | 50.00 |
| C. G. Osborne<br>H. E. Widener | 75.00 |
| FOLK-LORE. | |
| G. L. Kittredge | 20.00 |
| Edwin Stanton Mullins | 50.00 |
| Amount carried forward | $7,310.98 |

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FOR BOOKS FOR THE COLLEGE LIBRARY (*continued*).

| | |
|---|---|
| Amount brought forward | $7,310.98 |
| MOLIÈRE COLLECTION. | |
| Horace B. Stanton | 25.00 |
| FRENCH PLAYS. | |
| F. C. de Sumichrast | 15.00 |
| GERMAN DRAMA. | |
| Ellis L. Dresel | 50.00 |
| OCEANIC LINGUISTICS. | |
| Anonymous | 25.00 |
| SHAKESPEARE. | |
| Walter W. Naumberg | 100.00 |
| CATACOMBS AND CHRISTIAN ARCHAEOLOGY. | |
| John Harvey Treat | 200.00 |
| CHINA. | |
| Harold J. Coolidge | 50.00 |
| CUBA. | |
| E. de C. Zanetti | 150.00 |
| DUTCH EAST INDIES. | |
| Anonymous | 50.00 |
| Mrs. Edwin A. Hills | 50.00 |
| George E. Hills | 25.00 |
| FLORENCE. | |
| W. Bayard Cutting, Jr. | 50.00 |
| KOREA. | |
| Edwin V. Morgan | 16.77 |
| LONDON. | |
| William Phillips | 100.00 |
| MEXICO. | |
| Lucius C. Tuckerman | 50.00 |
| PARIS. | |
| Lawrence S. Butler | 50.00 |
| EARLIER LITERATURE OF ECONOMICS. | |
| W. H. Gratwick | 50.00 |
| F. W. Taussig | 30.00 |
| Charles G. Washburn | 25.00 |
| "LABOR PERIODICALS." | |
| James Loeb | 100.00 |
| Amount carried forward | $8,522.75 |

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| | |
|---|---|
| For books for the College Library (*continued*). | |
| Amount brought forward | $8,522.75 |
| Periodicals on Banking, to complete files. | |
| Anonymous | 2.00 |
| Thomas P. Beal | 25.00 |
| Arthur T. Lyman | 50.00 |
| John F. Moors | 25.00 |
| Moses Williams | 10.00 |
| Robert Winsor | 25.00 |
| Periodicals for the Stillman Infirmary. | |
| Howard P. Arnold | 10.00 |
| For Sundry Special Books. | |
| Anonymous | 25.00 |
| Charles K. Bolton | 2.16 |
| George B. Weston | 8.40 |
| For Binding Books. | |
| J. H. Clark | 124.20 |
| | $8,829.51 |

From Mrs. George A. Nickerson, $200, her fourth yearly gift in memory of her husband, George Augustus Nickerson, A.B. 1876, LL.B. 1879, for the purchase of books on folk-lore, for the College Library.

Toward providing additional service at the College Library, from

| | |
|---|---|
| Howard P. Arnold | $50 |
| George Blagden | 50 |
| Archibald Cary Coolidge | 1,250 |
| James J. Higginson | 200 |
| Edward King | 100 |
| Ogden Mills | 100 |
| Arthur M. Sherwood | 25 |
| | $1,775 |

From members of the Class of 1879, $40, for the Department of Economics, to purchase books for the working library founded by this Class.

From Philip Cabot, $24.91, to defray the cost of binding certain books in the Philosophical Library.

From Edward C. Moore, $4.07, to complete the set of the Theologische Literaturzeitung in the Divinity Library.

From the Society for Promoting Theological Education, $1,447, "for the purchase of books for the Library of the Divinity School and for the administration of said Library."

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From Mrs. T. J. Bowlker, $25, for the purchase of books for the Social Service Library of Phillips Brooks House.

For purchasing volumes to complete serials in the Library of the Peabody Museum of American Archaeology and Ethnology, from

| | |
|---|---|
| Henry W. Haynes | $100 |
| Charles Peabody | 25 |
| | $125 |

For the purchase of reprints of Contributions from the Zoölogical Laboratory, from

| | |
|---|---|
| Arthur A. Carey | $25 |
| Dudley L. Pickman | 50 |
| | $75 |

Toward the cost of publishing Harvard Psychological Studies, Volume II, from

| | |
|---|---|
| Anonymous | $6.02 |
| Joseph Lee | 350.00 |
| Reginald C. Robbins | 450.00 |
| William R. Warren | 300.00 |
| | $1,106.02 |

Toward the cost of publishing a thesis on Railroad Reorganization, from

| | |
|---|---|
| James Loeb | $100 |
| Arthur T. Lyman | 100 |
| Sumner B. Pearmain | 50 |
| Jacob H. Schiff | 250 |
| | $500 |

From K. G. T. Webster, $53, to defray the expense of keeping the libraries in Warren House open in the evening from the middle of April to the end of the term.

For the Botanic Garden and Botanical Museum, from

| | |
|---|---|
| Anonymous | $500.00 |
| Anonymous | 1,000.00 |
| Anonymous | 1,127.90 |
| Arthur F. Estabrook | 1,000.00 |
| Miss Caroline L. W. French | 100.00 |
| Walter Hunnewell | 800.00 |
| Miss Mary Lee Ware | 650.00 |
| | $5,177.90 |

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## For the Gray Herbarium, from

| | | | |
|---|---|---|---|
| R. L. Agassiz | $10.00 | Amount brought forward | $1,563.00 |
| Thomas Allen | 10.00 | Robert H. Gardiner | 10.00 |
| James Barr Ames | 10.00 | George A. Goddard | 10.00 |
| Miss Mary S. Ames | 10.00 | Mrs. Asa Gray | 185.44 |
| Anonymous | 1,000.00 | Miss Harriet Gray | 10.00 |
| Anonymous | 25.00 | Mrs. Henry S. Grew | 10.00 |
| Howard P. Arnold | 50.00 | Edward Everett Hale | 5.00 |
| E. F. Atkins | 10.00 | George W. Hammond | 20.00 |
| Walter C. Baylies | 10.00 | Mrs. Augustus Hemenway | 10.00 |
| W. S. Bigelow | 10.00 | Miss Clara Hemenway | 10.00 |
| Mrs. Arthur W. Blake | 10.00 | Miss A. P. Henchman | 10.00 |
| W. P. Blake | 10.00 | J. P. B. Henshaw | 10.00 |
| James C. Braman | 5.00 | Miss Rose Hollingsworth | 2.00 |
| Mrs. John L. Bremer | 10.00 | Robert C. Hooper | 10.00 |
| Edward M. Brewer | 10.00 | Clement S. Houghton | 10.00 |
| William Brewster | 10.00 | Henry S. Howe | 10.00 |
| Addison Brown | 10.00 | Charles W. Hubbard | 10.00 |
| Harold Haskell Brown | 10.00 | Mrs. Arthur Hunnewell | 50.00 |
| Stephen Bullard | 10.00 | H. S. Hunnewell | 10.00 |
| Mrs. William S. Bullard | 10.00 | Walter Hunnewell | 10.00 |
| Allston Burr | 10.00 | William A. Jeffries | 10.00 |
| H. D. Chapin | 10.00 | Charles W. Jenks | 10.00 |
| Charles F. Choate | 10.00 | Bernard Jenney | 10.00 |
| Miss Cora H. Clarke | 10.00 | Edward C. Johnson | 10.00 |
| Miss Louise H. Coburn | 10.00 | F. L. Kennedy | 10.00 |
| Mrs. C. A. Cummings in memory of F. H. Cummings | 10.00 | Charles A. Kidder | 10.00 |
| | | Mrs. Henry P. Kidder | 3.00 |
| Mrs. Charles P. Curtis | 10.00 | David P. Kimball | 10.00 |
| Henry P. Curtis | 10.00 | Mrs. David P. Kimball | 10.00 |
| Louis Curtis | 10.00 | Henry H. Kimball | 10.00 |
| Samuel B. Dana | 10.00 | Lemuel C. Kimball, Jr. | 10.00 |
| N. H. Daniels | 10.00 | The Misses Kimball | 10.00 |
| Frank A. Day | 25.00 | E. D. Leavitt | 10.00 |
| Walter Deane | 15.00 | George C. Lee | 10.00 |
| George Dexter | 10.00 | George V. Leverett | 25.00 |
| William S. Dexter | 30.00 | Mrs. George Linder | 10.00 |
| Miss Georgiana G. Eaton | 10.00 | Augustus P. Loring | 10.00 |
| William Endicott | 10.00 | Miss Katharine P. Loring | 10.00 |
| William Endicott, Jr. | 25.00 | Miss Louisa P. Loring | 10.00 |
| J. S. Fay, Jr. | 25.00 | William Caleb Loring | 10.00 |
| Mrs. J. N. Fiske | 10.00 | Mrs. William Caleb Loring | 10.00 |
| Mrs. W. H. Forbes | 3.00 | Mrs. Thornton K. Lothrop | 10.00 |
| Francis A. Foster | 10.00 | Mrs. George G. Lowell | 10.00 |
| Francis C. Foster | 10.00 | Arthur T. Lyman | 10.00 |
| Mrs. Francis C. Foster | 10.00 | Haslett McKim | 10.00 |
| Miss Harriet E. Freeman | 10.00 | Mrs. G. N. McMillan | 10.00 |
| Miss Cornelia A. French | 10.00 | Miss Ellen F. Mason | 10.00 |
| Amount carried forward | $1,563.00 | Amount carried forward | $2,243.44 |

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FOR THE GRAY HERBARIUM (*continued*).

| | | | |
|---|---|---|---|
| Amount brought forward | $2,243.44 | Amount brought forward | $2,563.44 |
| Miss Susan Minns | 25.00 | Francis Shaw | 10.00 |
| Mrs. Samuel Torrey Morse | 10.00 | Mrs. G. H. Shaw | 10.00 |
| Nathaniel C. Nash | 10.00 | David N. Skillings | 10.00 |
| Grenville H. Norcross | 10.00 | Francis Skinner | 10.00 |
| Mrs. Otis Norcross | 10.00 | F. P. Sprague | 10.00 |
| Mrs. Otis Norcross, Jr. | 10.00 | Nathaniel H. Stone | 10.00 |
| Peder Olsen | 10.00 | Mrs. J. A. Swan | 10.00 |
| Mrs. John F. Osgood | 10.00 | John E. Thayer | 200.00 |
| Charles W. Parker | 10.00 | Miss Helen W. Tinkham | 10.00 |
| Miss Mary R. Peabody | 10.00 | Benjamin Vaughan | 10.00 |
| Mrs. J. C. Phillips | 25.00 | C. C. Walker | 10.00 |
| Henry Pickering | 10.00 | Miss Caroline E. Ward | 10.00 |
| Mrs. Henry Pickering | 10.00 | Miss Cornelia Warren | 10.00 |
| Mrs. D. L. Pickman | 10.00 | B. M. Watson | 10.00 |
| David Pingree | 20.00 | Mr. and Mrs. F. G. Webster | 25.00 |
| Miss Elizabeth C. Putnam | 5.00 | Stephen M. Weld | 25.00 |
| Mr. and Mrs. George Putnam | 20.00 | Mrs. Charles T. White | 10.00 |
| Miss Sarah E. Read | 10.00 | S. B. Whiting | 10.00 |
| Mrs. W. H. Reed | 10.00 | George Wigglesworth | 10.00 |
| George E. Richards | 10.00 | Miss Adelia C. Williams | 10.00 |
| Denman W. Ross | 10.00 | E. F. Williams | 100.00 |
| Mrs. M. Denman Ross | 10.00 | John D. Williams | 20.00 |
| Mrs. Waldo O. Ross | 10.00 | Moses Williams | 50.00 |
| Mrs. Robert S. Russell | 25.00 | Ralph B. Williams | 50.00 |
| Mrs. Knyvet W. Sears | 10.00 | Mrs. Charlotte F. Woodman | 10.00 |
| Mrs. J. Montgomery Sears | 10.00 | Miss Mary Woodman | 10.00 |
| Amount carried forward | $2,563.44 | | $3,223.44 |

From Miss Catherine H. Bond and Miss Elizabeth L. Bond, $2,500, to be added, after meeting certain charges, to the unrestricted endowment of the Observatory.

From Mrs. Henry Draper, $10,000 additional, to be spent by the Director of the Observatory in prosecuting the researches in the photography of stellar spectra with which the late Dr. Henry Draper's name is honorably associated.

From Charles S. Fairchild, $5,000, for immediate use at the Observatory.

From E. C. Pickering, $5,000, to be added to the unrestricted income of the Observatory.

From an anonymous giver, $130, for immediate use at the Peabody Museum of American Archaeology and Ethnology.

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For the Peabody Museum of American Archaeology and Ethnology, from

| | |
|---|---|
| A friend | $100 |
| Clarence B. Moore | 500 |
| | $600 |

From Augustus Hemenway, $255, for a case in the Peabody Museum of American Archaeology and Ethnology.

Towards the expenses of the South American Expedition undertaken by the Peabody Museum of American Archaeology and Ethnology, from

| | |
|---|---|
| Anonymous | $300.00 |
| Louis J. de Milhau, on account of his offer of $15,000, | 4,999.92 |
| | $5,299.92 |

From Jacob H. Schiff, $10,000, for the purchase of collections for the Semitic Museum.

From friends and associates of the late Dr. John Homans,'58, of Boston, Mass., $1,554.01, for a bronze tablet in his memory, set in the Administration Building at the Medical School.

From an anonymous giver, $100, for current expenses at the Medical School.

From an anonymous giver, $600, for a teaching fellowship in Histology and Embryology for 1906–07.

From the Harvard Medical Alumni Association, $1,200, to be applied in 1906–07 to increase the salary of one or more of the younger instructors in the Medical School.

From an anonymous giver, $250, for the salary of a secretary for the Caroline Brewer Croft Fund Cancer Commission.

For salaries in the Department of Biological Chemistry, for 1906–07, from

| | |
|---|---|
| Arthur T. Cabot | $1,000 |
| Augustus Hemenway | 1,000 |
| Mrs. Hartman Kuhn | 1,000 |

for 1907–08, from

| | |
|---|---|
| Augustus Hemenway | 1,000 |
| Mrs. Hartman Kuhn | 1,000 |
| | $5,000 |

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From five anonymous givers, $450, for the promotion of research on Diabetes Mellitus.

From James J. Putnam and Moorfield Storey, trustees, $500, for a salary and for expenses in the Department of Neuropathology.

From Miss Katherine E. Bullard, $500 additional, to be used under the direction of the Department of Neuropathology, with the approval of the President and Fellows, for the benefit and advancement of the Bullard Neuropathological Collection at the Medical School.

From W. T. Councilman and F. B. Mallory, $246.31, toward the cost of certain apparatus in the Department of Pathology.

From John C. Phillips, $5,000, to be used under the direction of the Shattuck Professor of Pathological Anatomy, the Associate Professor of Pathological Anatomy and the donor, for work in the Department of Pathology.

From Morrill Wyman, $500, for special expenses connected with the Department of Pathology.

From John S. Ames, $1,000, for the Surgical Laboratory.

For the purchase of land, the erection of buildings, or the endowment of education and research, for the benefit of the Dental School, from

| | | | |
|---|---|---|---|
| Charles A. Brackett . . . . | $1,000.00 | Amount brought forward . | $1,800.00 |
| Mrs. D. M. Clapp and Howard Clapp in memory of Dr. Dwight M. Clapp . . . . | 50.00 | Mrs. Mary Forbes Russell . | 1,000.00 |
| John Thomas Codman . . . | 50.00 | J. G. W. Werner . . . . . | 9.00 |
| Mrs. George W. Collard . . | 100.00 | A grateful patient of L. D. Shepard . . . . . | 200.00 |
| James Longley . . . . . | 500.00 | Sixty-seven anonymous givers to the Harv. Dent. Alumni Fund . . . . . | 1,430.50 |
| Charles J. Morse . . . . . | 100.00 | | |
| Amount carried forward . | $1,800.00 | | $4,439.50 |

For construction expenses at the Arnold Arboretum, from

| | |
|---|---|
| Albert S. Bigelow . . . . . | $100 |
| Frank A. Day . . . . . | 100 |
| Charles E. Stratton . . . . . | 100 |
| | $300 |

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For exploration in Western China, on behalf of the Arnold Arboretum, undertaken by Ernest Henry Wilson, who will spend at least two years in collecting botanical specimens and seeds, and in securing photographs and other information about the plants of that country, especially the mountain flora, from

| | | | |
|---|---|---|---|
| Miss Mary S. Ames . . . | $7,000.00 | Amount brought forward | $14,100.00 |
| H. S. Hunnewell . . . . . | 1,000.00 | Edwin S. Webster . . . . | 1,000.00 |
| Walter Hunnewell . . . . | 1,000.00 | F. G. Webster . . . . . | 1,000.00 |
| T. E. Proctor . . . . . | 500.00 | Stephen M. Weld . . . . | 1,000.00 |
| Mrs. J. Montgomery Sears | 1,000.00 | Trustees of Caroline Whitney | |
| Charles A. Stone . . . . . | 1,000.00 | Fund . . . . . | 500.00 |
| Bayard Thayer . . . . . | 1,000.00 | F. G. Webster, Treasurer, | |
| John E. Thayer . . . . . | 1,600.00 | interest . . . . . | 80.42 |
| Amount carried forward | $14,100.00 | | $17,680.42 |

From the Massachusetts Society for Promoting Agriculture, $2,625, "to be expended at the Arnold Arboretum by the Director, to increase the knowledge of trees."

From Francis Skinner, $2,500, for the purchase of books for the Arboretum in memory of his father, Francis Skinner, of the Class of 1862.

From the Committee on the Regulation of Athletic Sports, $20,000, to be added to its previous gifts for improvements upon, and additions to, The Soldier's Field, to be made by said Committee, with the approval of the Corporation.

*The total amount of these gifts for immediate use is $165,791.18, as stated also on page 44.*

CHARLES F. ADAMS, 2D, *Treasurer.*

BOSTON, February, 1908.

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*General Statement of Receipts and Disbursements for the year ending*

INCOME.

| | | |
|---|---|---|
| Interest on notes, mortgages, advances, &c., | | $159,165.94 |
| Interest on Policies of Mass. Hospital Life Insurance Co., | | 849.00 |
| Interest on Bank Deposits. | | |
| Deposit in American Trust Co., | $46.15 | |
| " City Trust Co., | 1,524.57 | |
| " Equitable Trust Co., | 972.60 | |
| " Merchants National Bank, | 147.14 | |
| " National Union Bank, | 29.92 | |
| " Old Boston National Bank, | 1,543.95 | 4,264.33 |
| Interest on Public Funds (after deducting $187.38 for sinking premiums). | | |
| City of Boston 3½'s of 1920, | $350.00 | |
| Imperial Japanese 4½'s of 1925, | 767.02 | |
| Massachusetts 3½'s of 1913, | 1,185.25 | |
| " " " 1916, | 154.15 | |
| " " " 1935, | 199.08 | |
| " " " 1938, | 129.14 | |
| United States of Mexico 4's of 1954, | 3,960.00 | 6,744.64 |
| Interest on Railroad Bonds (after deducting $5,008.77 for sinking premiums). | | |
| Baltimore & Ohio 4's, | $4,000.00 | |
| " " (P.L. E. & W.V. system) Ref. 4's, | 4,000.00 | |
| " " So. Western 3½'s, | 3,500.00 | |
| Bangor & Aroostook Ref. 4's, | 5,000.00 | |
| Burlington & Mo. River in Neb. 6's, | 10,530.00 | |
| Central Vermont 4's, | 1,740.00 | |
| Chicago, Burlington & Quincy 4's, | 120.00 | |
| " " " Ill. Div. 4's, | 7,977.78 | |
| " " " 3½'s, | 15,243.80 | |
| Chicago & No. Western Gen. M. 3½'s, | 3,488.23 | |
| Chicago, Rock Island & Pacific 4's, | 3,920.90 | |
| Indiana, Illinois & Iowa 4's, | 4,000.00 | |
| Kansas City, Fort Scott & Memphis 6's, | 12,073.90 | |
| Kansas City, Memphis & Birmingham Income 5's, | 5,700.00 | |
| Kansas & Missouri 5's, | 2,700.00 | |
| Lake Shore & Michigan Southern 4's, | 4,000.00 | |
| Long Island Unified 4's, | 12,000.00 | |
| Louisville & Jeffersonville Bridge 4's, | 8,000.00 | |
| Minneapolis Union 5's, | 4,866.83 | |
| Missouri Pacific 5's, | 5,000.00 | |
| Montana Central 6's, | 4,859.37 | |
| New York Central & H. R. 3½'s (L. S. & M. S. Coll.), | 10,500.00 | |
| New York Central & H. R. 3½'s (M. C. Coll.), | 1,190.00 | |
| Amounts carried forward, | $134,410.81 | $171,023.91 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

EXPENSES.

| | | |
|---|---|---|
| **Paid to account of expenses in the** | | |
| **University**, as per Table I (page 79). | | |
| Salaries, | $44,829.09 | |
| Retiring Allowances, | 25,462.48 | |
| Peabody Museum of American Archaeology and Ethnology (part, see Table XIV, page 124), | 1,350.95 | |
| Semitic Museum (part, see Table XV, page 125), | 1,500.00 | |
| Germanic Museum (part, see Table XVI, p. 125), | 75.32 | |
| William Hayes Fogg Art Museum (part, see Table XVII, page 126), | 2,927.08 | |
| Appleton Chapel (part, see Table XIX, page 128), | 6,361.22 | |
| Phillips Brooks House (part, see Table XX, page 129), | 1,857.02 | |
| Other expenses, | 58,802.32 | $143,165.48 |
| **College**, as per Table II (page 94). | | |
| Salaries for instruction, | $523,572.76 | |
| Sundry salaries, | 15,733.33 | |
| Expenses on College Public Buildings, which are not valued in the Treasurer's books, | 30,026.89 | |
| Expenses on College Dormitories which are not valued in the Treasurer's books, | 42,150.21 | |
| General expenses, | 71,341.17 | |
| Fellowships, | 27,137.50 | |
| Scholarships, | 53,828.51 | |
| Loans and other aid to students, | 29,475.87 | |
| Prizes and expenses, | 3,584.00 | |
| Museum of Comparative Zoölogy (part, see Table XIII, page 123), | 4,227.00 | |
| **Jefferson** Physical Laboratory (part, see Table XVIII, page 127), | 665.96 | |
| **Hemenway** Gymnasium (part, see Table XXI, page 130), | 6,749.90 | |
| Summer Schools, | 34,382.24 | |
| Books, from special Funds and gifts, | 1,812.41 | |
| Apparatus and expenses for research, from special Funds and gifts, | 6,257.81 | |
| Publication expenses, from special Funds and gifts, | 5,485.50 | |
| Sundry payments from special Funds and gifts, | 18,854.29 | |
| Appropriations for collections and laboratories, | 41,939.48 | 917,224.83 |
| **Library**, as per Table III (page 103). | | |
| Salaries, | $18,900.00 | |
| Services and wages, | 20,984.14 | |
| Books, | 30,147.15 | |
| Other expenses, | 10,333.13 | 80,364.42 |
| Amount carried forward, | | $1,140,754.73 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*).

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $134,410.81 | $171,023.91 |
| **Interest on Railroad Bonds (*continued*).** | | |
| New York Central & H. R. (refunding) Gold M. 3½'s, | 17.50 | |
| New York, New Haven & Hartford 4's, . . . . . | 3,875.00 | |
| " " " 3½'s, . . . . . | 42.25 | |
| New York, Ontario & Western 4's, . . . . . | 7,884.13 | |
| Norfolk & Western 1st Con. 4's of 1997, . . . . . | 20.00 | |
| Northern Pacific–Great Northern Joint 4's, . . . . | 18,280.00 | |
| Oregon Short Line 5's, . . . . . | 4,583.03 | |
| Oregon Short Line 4's, . . . . . | 4,000.00 | |
| Pennsylvania Co. 3½'s, . . . . . | 2,555.00 | |
| Richmond–Washington Co. 4's, . . . . . | 9,834.05 | |
| St. Louis & San Francisco Ref. 4's, . . . . . | 4,000.00 | |
| St. Paul, Minneapolis & Manitoba 4's, . . . . . | 7,535.91 | |
| Southern Pacific 4's, . . . . . | 4,000.00 | |
| Terminal R. R. Association of St. Louis 4's, . . . | 8,000.00 | |
| Union Pacific 4's, . . . . . | 18,000.00 | |
| Wisconsin Central, Minneapolis Terminal Purchase Money M 3½'s, . . . . . | 1,750.00 | 228,787.68 |
| **Interest on Traction Bonds (after deducting $925.39 for sinking premiums).** | | |
| Boston & Northern 4's, . . . . . | $6,000.00 | |
| Central Crosstown Coll. Trust 5's, . . . . . | 6,250.00 | |
| Interborough Metropolitan Coll. Trust 4½'s, . . . | 8,987.50 | |
| Interborough Rapid Transit 4's, . . . . . | 8,000.00 | |
| Metropolitan West Side Elevated 4's, . . . . . | 4,000.00 | |
| " " " Extension 4's, . | 4,200.00 | |
| Old Colony Street 5's, . . . . . | 6,000.00 | |
| Public Service Corporation of New Jersey 5's, . . | 5,000.00 | |
| Schenectady 4½'s, . . . . . | 4,274.16 | |
| Second Avenue 5's, . . . . . | 4,605.26 | |
| Third Avenue 4's, . . . . . | 7,975.31 | |
| United Traction & Electric Co. 5's, . . . . . | 4,563.63 | 69,855.86 |
| **Interest on Sundry Bonds (after deducting $3,611.25 for sinking premiums).** | | |
| American Bell Telephone Co. 4's, . . . . . | $10,162.71 | |
| American Tel. & Tel. Co. 4's, . . . . . | 8,000.00 | |
| American Tel. & Tel. Co. 5's, . . . . . | 2,500.00 | |
| Boston Electric Light Co. 5's, . . . . . | 4,320.51 | |
| Broadway Realty Co. 5's, . . . . . | 10,332.05 | |
| Butte Water Co. 5's, . . . . . | 250.00 | |
| Chicago Edison Co. 5's, . . . . . | 5,609.60 | |
| Chicago Junc. Railways & Union Stock Yards Co. 5's, | 14,979.85 | |
| Chicago Junc. Railways & Union Stock Yards Co. 4's, | 4,000.00 | |
| Detroit Edison Co. 5's, . . . . . | 4,908.28 | |
| Amounts carried forward, . . . | $65,063.00 | $469,667.45 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

EXPENSES (*continued*).

| | | |
|---|---|---|
| Amount brought forward, | | $1,140,754.73 |
| **Divinity School,** as per Table IV (page 107). | | |
| Salaries for instruction, | $27,146.59 | |
| Scholarships, Exhibitions, and Prizes, | 2,224.77 | |
| Other expenses, | 10,139.35 | 39,510.71 |
| **Law School,** as per Table V (page 109). | | |
| Salaries for instruction, | $53,475.00 | |
| Librarians and assistants, | 11,136.91 | |
| Scholarships and loans, | 6,225.37 | |
| Other expenses, | 29,790.02 | 100,627.30 |
| **Medical School,** as per Table VI (page 118). | | |
| Salaries for instruction, | $92,291.66 | |
| Fees repaid to Instructors, | 10,934.00 | |
| Retiring allowance, | 1,000.00 | |
| Fellowships, | 2,675.00 | |
| Scholarships, | 4,587.50 | |
| Expenses connected with prize, | 12.50 | |
| **Warren** Anatomical Museum, | 1,965.12 | |
| Books, from special Funds and gifts, | 422.39 | |
| Sundry payments made from special Funds and gifts, | 16,196.04 | |
| Laboratory appropriations, | 16,769.87 | |
| Other expenses, | 54,426.89 | 201,280.97 |
| **Medical School** Undertaking, as per Table XXIV (page 133). | | |
| Building expenses, | $194,106.40 | |
| Interest on advances to real estate, | 14,606.81 | |
| Other expenses, | 237.01 | 208,950.22 |
| **Dental School,** as per Table VII (page 116). | | |
| Salaries for instruction, | $5,437.50 | |
| Other expenses, | 13,700.96 | 19,138.46 |
| **Bussey Institution,** as per Table VIII (page 117). | | |
| Salaries for instruction, | $8,400.00 | |
| Other expenses, | 10,115.57 | 18,515.57 |
| **Arnold Arboretum,** as per Table IX (page 118). | | |
| Salaries, | $4,950.00 | |
| Books from gifts, | 48.80 | |
| Other expenses, | 28,805.05 | 33,803.85 |
| **Botanic Garden** and **Botanical Museum,** as per Table X (page 119). | | |
| Services and wages, | $655.22 | |
| Labor, | 4,911.50 | |
| Other expenses, | 5,092.00 | 10,658.72 |
| Amount carried forward, | | $1,773,240.53 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*).

| | | |
|---|---|---|
| Amounts brought forward, . . . | $65,063.00 | $469,667.45 |
| **Interest on Sundry Bonds (*continued*).** | | |
| Girard Point Storage Co. 3½'s, . . . . . | 691.53 | |
| Laclede Gas Light Co. 5's, . . . . . | 1,000.00 | |
| Metropolitan Tel. & Tel. Co. 5's, . . . . . | 7,500.00 | |
| Mexican Coal & Coke Co. 5's, . . . . . | 300.00 | |
| Minneapolis General Electric Co. 5's, . . . . . | 4,915.26 | |
| Montreal Light, Heat and Power Co. 4½'s, . . . . | 4,466.66 | |
| Municipal Gas & Electric Co. 4½'s, . . . . . | 4,500.00 | |
| New England Tel. & Tel. Co. 5's, . . . . . | 4,058.82 | |
| Portland General Electric Co. 5's, . . . . . | 6,202.78 | |
| Railway & Light Securities Co. 5's, . . . . . | 4,965.90 | |
| St. Louis National Stock Yards Co. 4's, . . . . . | 6,400.00 | |
| Seattle Electric Co. 5's, . . . . . | 7,229.17 | |
| United Electric Securities Co. 5's, . . . . . | 2,105.36 | |
| United States Steel Corporation 5's, . . . . . | 1,600.00 | |
| Wood Worsted Mills 4½'s, . . . . . | 2,250.00 | 123,248.48 |
| **Dividends on Railroad Stocks.** | | |
| Boston & Lowell, . . . . . | $2,880.00 | |
| Chicago, Milwaukee & St. Paul, . . . . . | 5,302.50 | |
| Chicago & Northwestern, . . . . . | 8,837.50 | |
| Fitchburg, preferred, . . . . . | 1,185.00 | |
| Great Northern, preferred, . . . . . | 6,965.00 | |
| Manhattan, . . . . . | 4,900.00 | |
| New York Central & Hudson River, . . . . . | 8,956.25 | |
| New York, New Haven & Hartford, . . . . . | 3,344.00 | |
| Northern (N. H.), . . . . . | 1,740.00 | |
| Northern Pacific, . . . . . | 875.00 | |
| Old Colony, . . . . . | 2,485.00 | |
| Pennsylvania, . . . . . | 19,173.00 | |
| West End Street, preferred, . . . . . | 208.00 | 66,851.25 |
| **Dividends on Manufacturing and Telephone Stocks.** | | |
| American Telephone & Telegraph Co., . . . . . | $5,600.00 | |
| American Smelters' Securities Co., preferred, . . | 10,000.00 | |
| Amoskeag Manufacturing Co., . . . . . | 1,320.00 | |
| Brookside Mills, . . . . . | 87.50 | |
| General Electric Co., . . . . . | 600.00 | |
| Merrimack Manufacturing Co., . . . . . | 374.00 | |
| Pacific Mills, . . . . . | 8,320.00 | 26,301.50 |
| **Dividends on Real Estate Trust Stocks.** | | |
| Barristers Hall Trust, . . . . . | $3,045.00 | |
| Boston Real Estate Trust, . . . . . | 1,260.00 | |
| Central Building Trust, . . . . . | 100.00 | |
| Amounts carried forward, . . . . . | $4,405.00 | $686,068.68 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

EXPENSES (*continued*).

| | | |
|---|---|---|
| Amount brought forward, | | $1,773,240.53 |
| **Gray Herbarium,** as per Table XI (page 120). | | |
| Salaries, | $4,450.00 | |
| Services and wages, | 3,270.56 | |
| Other expenses, | 3,768.14 | 11,488.70 |
| **Observatory,** as per Table XII (page 121). | | |
| Salaries, | $18,000.00 | |
| Services and wages, | 7,774.32 | |
| Other expenses, | 35,112.14 | 60,886.46 |
| **Museum of Comparative Zoölogy,** as per Table XIII (page 122). | | |
| Salaries, | $11,100.00 | |
| Services and wages, | 3,907.80 | |
| **Sturgis Hooper** Fund, salary and expenses, | 5,140.00 | |
| Other expenses, | 24,072.89 | |
| | $44,220.69 | |
| Less amount paid from College income (see Table II, page 99), | 4,227.00 | 39,993.69 |
| **Peabody Museum of American Archaeology and Ethnology,** as per Table XIV (page 124). | | |
| **Peabody** Professor Fund, **Peabody** Professor and Curator, | $2,371.54 | |
| Services and wages, | 3,352.80 | |
| Fellowships and scholarships, | 1,589.47 | |
| Other expenses, | 10,931.49 | |
| | $18,245.30 | |
| Less amount paid from University income (see Table I, page 81), | 1,350.95 | 16,894.35 |
| **Semitic Museum,** as per Table XV (page 124). | | |
| Curator, | $500.00 | |
| Collections, | 4,618.29 | |
| Excavations in Palestine, | 2,575.00 | |
| Other expenses, | 1,000.00 | |
| | $8,693.29 | |
| Less amount paid from University income (see Table I, page 81), | 1,500.00 | 7,193.29 |
| **Germanic Museum,** as per Table XVI (page 125). | | |
| General expenses, | $1,310.24 | |
| Less amount paid from University income (see Table I, page 81), | 75.32 | 1,234.92 |
| Amount carried forward, | | $1,910,931.94 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*).

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $4,405.00 | $686,068.68 |
| Dividends on Real Estate Trust Stocks (*continued*). | | | |
| Department Store Trust, . . . . . | | 11,250.00 | |
| Essex Street Trust, . . . . . | | 4,000.00 | |
| Kimball Building Trust, . . . . . | | 1,125.00 | |
| Paddock Building Trust, . . . . . | | 4,161.50 | |
| Post Office Square Building Trust, . . . . . | | 2,750.00 | 27,691.50 |
| Dividends on Sundry Stocks. | | | |
| Calumet & Hecla Mining Co., . . . . . | | $1,200.00 | |
| Laclede Gas Light Co., preferred, . . . . . | | 1,000.00 | |
| Massachusetts Gas Companies, preferred, . . . . | | 6,000.00 | |
| United States Smelting, Refining & Mining Co., . | | 700.00 | 8,900.00 |
| Real Estate Investments, from rents, &c., net receipts. | | | |
| Cambridge (University Houses and Lands). | | | |
| Gross receipts, . . . . . | | $41,198.92 | |
| Less Taxes, . . . . . | $6,526.41 | | |
| Insurance, . . . . . | 908.10 | | |
| Repairs, improvements, care, &c., . | 16,787.68 | 24,222.19 | 16,976.73 |
| Boston (general investments). | | | |
| Gross receipts, . . . . . | | $255,880.51 | |
| Less Taxes, . . . . . | $50,441.16 | | |
| Insurance, . . . . . | 2,016.28 | | |
| Repairs, improvements, care, &c., . | 15,781.19 | | |
| Repaid to capital, . . . . . | 8,157.27 | 76,395.90 | 179,484.61 |
| **Bussey** real estate. | | | |
| Gross receipts, . . . . . | | $62,970.92 | |
| Less Taxes, . . . . . | $15,666.27 | | |
| Insurance, . . . . . | 1,406.17 | | |
| Interest, . . . . . | 13,989.10 | | |
| Repairs, improvements, care, &c., . | 9,574.60 | | |
| Heat and power, . . . . . | 6,629.84 | | |
| Repaid to capital, . . . . . | 1,000.00 | 48,215.98 | 14,754.94 |
| Sundry estates (special investments). | | | |
| Gross receipts, . . . . . | | $16,675.46 | |
| Less Taxes, . . . . . | $3,482.31 | | |
| Insurance, . . . . . | 343.80 | | |
| Interest, . . . . . | 8.56 | | |
| Repairs, improvements, care, &c., . | 1,498.85 | 5,333.52 | 11,341.94 |
| Amount carried forward, . . . . . | | | $945,218.40 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

EXPENSES (*continued*).

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $1,910,931.94 |
| **William Hayes Fogg Art Museum,** as per Table XVII (page 126). | | | |
| Salaries, | | $1,000.00 | |
| Collections, | | 741.35 | |
| Other expenses, | | 6,896.92 | |
| | | $8,638.27 | |
| Less amount paid from University income (see Table I, page 81), | | 2,927.08 | 5,711.19 |
| **Jefferson Physical Laboratory,** as per Table XVIII (page 127). | | | |
| Research expenses, from Funds and gift, | | $3,870.77 | |
| Loan repaid, with interest, | | 1,381.95 | |
| Other expenses, | | 4,511.24 | |
| | | $9,263.96 | |
| Less amount paid from College income (see Table II, page 99), | | 665.96 | 8,598.00 |
| **Appleton Chapel,** as per Table XIX (page 128). | | | |
| Salaries, | | $5,418.80 | |
| Choir, | | 1,600.00 | |
| Other expenses, | | 1,848.19 | |
| | | $8,866.99 | |
| Less amount paid from University income (see Table I, page 81), | | 6,361.22 | 2,505.77 |
| **Phillips Brooks House,** as per Table XX (page 128). | | | |
| Salaries, | | $700.00 | |
| Other expenses, | | 3,144.55 | |
| | | $3,844.55 | |
| Less amount paid from University income (see Table I, page 81), | | 1,857.02 | 1,987.53 |
| **Hemenway Gymnasium,** as per Table XXI (page 129). | | | |
| Salaries, | | $5,000.00 | |
| Other expenses, | | 6,020.68 | |
| | | $11,020.68 | |
| Less the following items: — | | | |
| Paid from College income (see Table II, page 99), | $6,749.90 | | |
| Paid from Divinity School income (see Table IV, page 108), | 87.04 | | |
| Paid from Law School income (see Table V, page 110), | 1,667.36 | 8,504.30 | 2,516.38 |
| Amount carried forward, | | | $1,932,250.81 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*).

| | | | |
|---|---|---|---|
| Amount brought forward, . . . . . | | | $945,218.40 |
| **Receipts from Students.** | | | |
| Tuition fees, regular and additional courses. | | | |
| College, . . . . . | $444,128.06 | | |
| Divinity School, . . . . . | 5,500.00 | | |
| Law School, . . . . . | 102,880.00 | | |
| Medical School, . . . . . | 61,014.07 | | |
| Dental School, . . . . . | 7,865.00 | | |
| Bussey Institution, . . . . . | 4,875.00 | | |
| School for Social Workers, . . . . | 253.33 | $626,515.46 | |
| Tuition fees, summer courses. | | | |
| College, . . . . . | $22,472.00 | | |
| Divinity School, . . . . . | 1,545.00 | | |
| Medical School, . . . . . | 7,698.05 | | |
| Dental School, . . . . . | 437.50 | 32,152.55 | |
| Registration fees, summer courses. | | | |
| College, . . . . . | | 1,564.00 | |
| Laboratory fees. | | | |
| College, . . . . . | $33,627.84 | | |
| Medical School, . . . . . | 3,355.95 | | |
| Dental School, . . . . . | 3,773.04 | | |
| Botanic Garden, . . . . . | 374.63 | 41,131.46 | |
| Examination fees. | | | |
| College. Admission, . . . . . | $9,395.48 | | |
| Condition, make-up, and advanced standing, . | 3,483.00 | | |
| Doctor of Philosophy, . | 30.00 | | |
| Medical School, . . . . . | 96.00 | | |
| Dental School, . . . . . | 27.00 | 13,031.48 | |
| Graduation fees. | | | |
| College, . . . . . | $7,840.00 | | |
| Medical School, . . . . . | 300.00 | 8,140.00 | |
| Matriculation fees, Medical School, . . . . . | | 460.00 | |
| Rooms in dormitories. | | | |
| College buildings, . . . . . | $99,678.33 | | |
| Less receipts from students, separately entered in University Houses and Lands account, . . . . . | 15,873.33 | | |
| | $83,805.00 | | |
| Divinity Hall, . . . . . | 2,925.00 | 86,730.00 | |
| Library fines. | | | |
| Library, . . . . . | $483.64 | | |
| Divinity School, . . . . . | 7.45 | | |
| Peabody Museum, . . . . . | 1.00 | 492.09 | |
| Amounts carried forward, . . . . . | | $810,217.04 | $945,218.40 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

EXPENSES (*continued*).

| | | |
|---|---|---|
| Amount brought forward, | | $1,932,250.81 |
| **Stillman Infirmary,** as per Table XXII (page 130). | | |
| Services and wages, | $5,440.81 | |
| Food and supplies, | 6,250.46 | |
| Other expenses, | 6,991.81 | 18,683.08 |
| Annuities from the following Funds. | | |
| Advancement of Astronomical Science (1901), | $2,370.00 | |
| " " " " (1902), | 648.66 | |
| **Bussey** Trust, | 4,000.00 | |
| **Caroline Brewer Croft,** | 2,180.99 | |
| **Gurney,** | 1,000.00 | |
| **Henry S. Nourse,** | 1,000.00 | |
| Professorship of Hygiene, | 3,666.82 | |
| **James Skillen** Memorial, | 300.00 | |
| **George Smith,** | 900.00 | |
| **Alexander W. Thayer,** | 480.00 | |
| **Charles Wilder,** | 1,896.00 | 18,442.47 |
| Class Funds. | | |
| Paid the Secretary of the **Class of 1853,** | $149.00 | |
| Paid the Secretary of the **Class of 1856,** | 355.50 | 504.50 |
| Sundry payments. | | |
| **Calvin** and **Lucy Ellis** Fund. | | |
| Taxes, $121.61 | | |
| Legal services, 3.63 | $125.24 | |
| **George H. Emerson** Scholarship Fund. | | |
| Taxes, | 84.35 | |
| **Charles L. Hancock** Fund, taxes on Chelsea real estate, | 33.32 | |
| **Henry S. Nourse** Fund, expenses, | 20.00 | |
| **Daniel Williams** Fund, for the benefit of the Masphee and Herring Pond Indians, | 800.43 | |
| **Sarah Winslow** Fund, to the Minister and the Teacher at Tyngsborough, Mass., | 221.88 | |
| Woodland Hill Fund, taxes on Muddy River land, and other expenses, | 1,332.02 | |
| Gifts for Cuban Teachers, expenses, | 52.00 | 2,669.24 |
| To reimburse the Committee in charge of the Shaler Memorial gifts, for expenses, | | 760.23 |
| Amount carried forward, | | $1,978,310.33 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*).

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $810,217.04 | $945,218.40 |
| Receipts from Students (*continued*). | | | |
| **Stillman** Infirmary. | | | |
| Annual fees, . . . . . | $14,308.00 | | |
| Receipts from patients, . . . . . | 4,682.52 | 18,990.52 | |
| Use of Microscopes. | | | |
| Dental School, . . . . . | | 51.00 | |
| Use of lockers, Hemenway Gymnasium, . . . . . | | 2,418.00 | |
| Summer School excursions, surplus, . . . . . | | 155.02 | 831,831.58 |
| **Sundries.** | | | |
| Professorship of Hygiene, from Trustees, . . . . | | $1,573.84 | |
| **Asa Gray's** copyrights, . . . . . | | 814.29 | |
| Trustee of **George H. Emerson** estate, . . . | | 153.95 | |
| Trustees of **Edward Hopkins,** . . . . . | | 206.47 | |
| Sale of grass, wood, old material, &c., . . . . . | | 4,821.14 | |
| " old examination papers, . . . . . | | 493.22 | |
| " tickets to Commencement Lunch, . . . . | | 422.00 | |
| " tickets to Divinity School Alumni Dinner, . | | 52.00 | |
| " books, pamphlets, catalogues, &c., . . . . | | 8,228.98 | |
| " slides and photographs, . . . . . | | 177.10 | |
| " horses, . . . . . | | 80.00 | |
| Board of horses, cattle, &c., at **Bussey** Institution, | | 5,491.26 | |
| Use of Library by resident graduates and others, . | | 90.00 | |
| " Gymnasium by graduates and others, . . . | | 98.38 | |
| " Buildings (not Univ. Houses and Lands), . | | 6,991.17 | |
| From instructors in the Medical School to pay for advertising summer courses, . . . . . | | 360.00 | |
| Fees in Infirmary, Dental School, . . . . . | | 4,809.25 | |
| **Mary L. Whitney** Scholarship, from the Executor of the will of **C. L. B. Whitney,** . . . . | | 97.50 | |
| Engineering camp at Squam Lake, . . . . . | | 9,039.16 | |
| Fire insurance awards for loss on property not held as an investment, . . . . . | | 142.00 | |
| Loan in place of income for research in Physics, | | 4,250.00 | |
| Heat and power to the House of the Good Samaritan, . . . . . | | 2,847.22 | 50,738.93 |
| Total amount of income, excluding gifts, . . . | | | $1,827,788.91 |
| Gifts for immediate use (see page 83), . . . . . | | | 165,791.18 |
| Amount carried forward, . . . . . | | | $1,993,580.09 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

EXPENSES (*continued*).

| | | |
|---|---|---|
| Amount brought forward, | | $1,973,310.33 |
| Construction Funds. | | |
| Antitoxin Laboratory, | $404.89 | |
| Addition to Gore Hall, | 14,631.62 | |
| Langdell Hall, | 246,417.40 | |
| Stadium, and improvements at The Soldier's Field, | 2,353.81 | 263,807.72 |
| Total amount of expenses, | | $2,237,118.05 |

Amount carried forward, $2,237,118.05

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*General Statement of Receipts and Disbursements for the year ending*

Amount brought forward, . . . . . $1,998,580.09

## RECEIPTS EXCLUSIVE OF INCOME.

GIFTS FOR CAPITAL ACCOUNT.

| | | |
|---|---|---|
| **Samuel Phillips Prescott Fay** 1798 Fund and Scholarship, | $5,000.00 | |
| **Arnold** Arboretum Fund (additional), | 745.00 | |
| **Willard** Scholarship Fund, | 10,000.00 | |
| Centennial Fund for the Botanic Garden, | 850.00 | |
| **Martin Brimmer** Fund, | 50,000.00 | |
| **James Jackson Cabot** Fund, | 6,000.00 | |
| **Francis James Child** Memorial Fund (add'l), | 50.00 | |
| Class Subscription Fund, | 20.00 | |
| Twenty-fifth Anniversary Fund of the **Class of 1881,** | 10,596.43 | |
| **Edward Erwin Coolidge** Fund, | 9,000.00 | |
| **R. H. Eddy** Bequest (additional), | 1.00 | |
| **Nelson Robinson Jr.** Additional Fund (add'l), | 25,000.00 | |
| German Professorship Fund, | 350.00 | |
| **F. B. Greenough** Fund (Surgical Research) (additional), | 500.00 | |
| **Edwin A. W. Harlow** Fund (additional), | 9,285.48 | |
| **John Homans** Memorial Fund, | 50,000.00 | |
| **Walter Augustus Lecompte** Professorship of Otology Fund, | 50,000.00 | |
| Boston Newsboys' Scholarship Fund, | 2,667.16 | |
| **Lyman Nichols** Fund, | 10,000.00 | |
| **Charles Eliot Norton** Book Fund (additional), | 454.92 | |
| **Sarah E. Potter** Endowment Fund, | 50,165.00 | |
| **Shaler** Memorial Fund, | 32,238.23 | |
| **James Skillen** Memorial Fund, | 10,857.39 | |
| **George Smith** Bequest (additional), | 1,981.02 | |
| **Jerome Wheelock** Fund (additional), | 10.00 | |
| **Edward Wigglesworth** Professorship of Dermatology Fund, | 50,000.00 | |
| **Harvard** Medical Alumni Fund, | 2,430.00 | |
| **Emperor William** Fund, | 6,970.00 | |
| Teachers' Endowment Fund (additional), | 89,269.00 | |
| **Stephen Salisbury** (1907) Fund, | 5,120.00 | |
| Fund of the **Class of 1882,** | 53,863.36 | |
| **William R. Castle** Fund, | 1,000.00 | |
| **William Reed** Scholarship Fund, | 4,000.00 | 548,423.99 |

Amount carried forward, . . . . . $2,542,004.08

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $2,237,118.05 |

## INVESTMENTS AND SUNDRY PAYMENTS.

### GENERAL INVESTMENTS.

| | | |
|---|---|---|
| $40,000 | Chicago Edison Co. 1st M. 5's of 1926, . . . | $40,000.00 |
| 100,000 | Chicago & Western Indiana Coll. Trust 5% Notes of 1910, . . . . . | 98,000.00 |
| 100,000 | General Electric Co. Conv. Deb. 5's of 1917 (subscription), . . . . . | 50,000.00 |
| 100,000 | Interborough Rapid Transit 5% Gold Notes of 1910, . . . . . | 97,250.00 |
| 100,000 | Madison River Power Co. 1st M. 5's of 1935, | 85,000.00 |
| 50,000 | New York Central & Hudson River 5% Notes of 1910, . . . . . | 49,875.00 |
| 5,000 | New York, New Haven & Hartford Conv. 3½'s of 1956, . . . . . | 5,675.00 |
| 50,000 | New York, New Haven & Hartford Conv. 3½'s of 1956 (subscription 75% paid), . . . . | 43,687.50 |
| 100,000 | North American Co. Coll. Trust 5's of 1912, | 93,625.00 |
| 50,000 | Portland General Electric Co. 1st M. 5's of 1935, . . . . . | 50,000.00 |
| 50,000 | United Electric Securities Co. Coll. Trust 5's of 1936, . . . . . | 50,000.00 |
| 620 | shares Am. Tel. & Tel. Co. (subscription), . | 32,110.14 |
| 700 | " Baltimore & Ohio, . . . . . | 70,362.50 |
| 400 | " Chicago, Mil. & St. Paul, . . . . . | 70,950.00 |
| 368 | " " " " (subscrip.), | 17,793.44 |
| 507 | " " " " pref'd " | 12,645.58 |
| 725 | " Chicago & North Western, . . . . . | 96,462.50 |
| 500 | " Edison Electric Illuminating Co. of Boston, Mass., . . . . . | 101,062.50 |
| 300 | " General Electric Co., . . . . . | 48,070.00 |
| 382 | " Great Northern, pref'd (subscription), | 21,010.00 |
| 955 | " Great Northern Iron Ore Properties, (stock dividend), . . . . . | ..... |
| 800 | " Louisville & Nashville, . . . . . | 93,925.00 |
| 277 | " New York Central & Hudson River, . | 27,700.00 |
| 500 | " Northern Pacific, . . . . . | 64,537.50 |
| Old Boston Music Hall Estate, . . . . . | $900,000.00 | |
| Less mortgage assumed, . . . . . | 550,000.00 | |
| | $350,000.00 | |
| Commission, legal expenses and plans, | 6,611.00 | 356,611.00 |
| Improvements on Faneuil Hall Square Estate, . . . . | | 34,061.80 |
| " on Gray Estate, . . . . . | | 28,874.26 |
| Amounts carried forward, . . . | $1,739,288.72 | $2,237,118.05 |

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*General Statement of Receipts and Disbursements for the year ending*

RECEIPTS EXCLUSIVE OF INCOME (*continued*).

| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $2,542,004.08 |
| SALES, ETC., GENERAL INVESTMENTS. | | |
| $50,000 American Tel. & Tel. 5% Gold Coupon Notes of 1907, paid at par, . . . . . | $50,000.00 | |
| 36,800 Burlington & Mo. River (in Neb.) non. ex. 6's of 1918, . . . . . | 36,800.00 | |
| 8,000 Pennsylvania Co. 3½'s of 1916, . . . . . | 8,000.00 | |
| 100,000 Schenectady 1st M. 4½'s of 1941, . . . . | 105,000.00 | |
| 2,000 United States of Mexico 4's of 1954, . . . | 2,000.00 | |
| 1,000 shares American Tel. & Tel. Co., . . . . | 139,625.00 | |
| 500 " Chicago, Milwaukee & St. Paul, . . . . . $93,927.50 | | |
| Less transfer tax, . . 10.00 | 93,917.50 | |
| 955 " Great Northern Iron Ore Properties (stock dividend), . . . . . | ..... | |
| Notes paid, . . . . . | 1,608,400.00 | 2,043,742.50 |
| SALES, ETC., SPECIAL INVESTMENTS OF VARIOUS FUNDS. | | |
| **Bussey** Trust. | | |
| Sale of real estate, . . . . . | $6,683.55 | |
| Less commission . . . . . | 522.08 | 6,161.47 |
| **Edward W. Codman** Fund. | | |
| Mortgage Note paid, . . . . . | | 5,000.00 |
| **Price Greenleaf** Fund. | | |
| 3,000 Burl. & Mo. R. (in Neb.) non ex. 6's called and paid at par, . . . . . | $3,000.00 | |
| 8 rights New York Central & Hudson River, . | 16.35 | |
| 40 shares Great Northern Iron Ore Properties, . (stock dividend), . . . . . | ..... | |
| Note of Massachusetts Cotton Mills, paid, . | 50,000.00 | 53,016.35 |
| **Henry S. Nourse** Fund. | | |
| 25 shares Brookside Mills, . . . . . | | 2,618.75 |
| Amount carried forward, . . . . . | | $4,652,543.15 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

INVESTMENTS AND SUNDRY PAYMENTS (*continued*).

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . | | $1,739,288.72 | $2,237,118.05 |
| GENERAL INVESTMENTS (*continued*). | | | |
| Advances to **Bussey** real estate, . . . . . | | 4,010.14 | |
| " **Calvin** and **Lucy Ellis** real estate, . | | 56.71 | |
| " **Harvard** Dining Association. | | | |
| To long period debt, . . . . | $50.00 | | |
| To short " " . . . . | 1,248.62 | 1,298.62 | |
| " Sundry accounts, . . . . . | | 1,642.25 | |
| Invested in notes, . . . . . | | 1,360,000.00 | |
| Accrued interest and expenses on bonds bought, . . . | | 4,232.91 | 3,110,529.35 |
| SPECIAL INVESTMENTS OF VARIOUS FUNDS. | | | |
| **Daniel A. Buckley** Fund. | | | |
| Cambridge Real Estate. | | | |
| Improvements, . . . . . | | $9,970.46 | |
| Deferred charge on sale, . . . . . | | 5.00 | 9,975.46 |
| **Price Greenleaf** Fund. | | | |
| 4 shares New York Central & Hudson River (subscribed at par), . . . . . | | $400.00 | |
| 16 " Great Northern, preferred (subscription), | | 880.00 | |
| 40 " Great Northern Iron Ore Properties, (stock dividend), . . . . . | | ..... | |
| Note of Massachusetts Cotton Mills, . . . . | | 50,000.00 | 51,280.00 |
| University Houses and Lands. | | | |
| Real estate purchased, . . . . . | | | 16,760.00 |
| Property received for **Edward Erwin Coolidge** Fund. | | | |
| 200 shares United States Smelting, Refining & Mining Co., . | | | 9,000.00 |
| Property received for **Sarah E. Potter** Endowment Fund. | | | |
| 31 shares Pureoxia Co., . . . . . | | | 165.00 |
| Property received for **William Reed** Scholarship Fund. | | | |
| $2,000 Northern Pacific-Great Northern Joint 4's (C. B. & Q. Coll.) of 1921, . . . . . | | $2,000.00 | |
| 1,000 New York Central & Hudson River Gold Refunding M. 3½'s of 1997, . . . . . | | 1,000.00 | |
| 1,000 Norfolk & Western Divisional 1st lien & gen. M. 4's of 1944, . . . . . | | 1,000.00 | 4,000.00 |
| Property received for **William R. Castle** Fund. | | | |
| $1,000 Honolulu Gas Co., Limited, 6's of 1925, . . . . . | | | 1,000.00 |
| Amount carried forward, . . . . . | | | $5,439,827.86 |

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*General Statement of Receipts and Disbursements for the year ending*

RECEIPTS, EXCLUSIVE OF INCOME (*continued*).

| | | |
|---|---|---|
| Amount brought forward, | | $4,652,543.15 |
| SUNDRIES. | | |
| **Harvard** Dining Association. | | |
| To reduce long period debt, . . . . | $7,700.00 | |
| " short " " . . . . | 1,095.45 | $8,795.45 |
| **Randall** Hall Association, to reduce debt, . . . . | | 1,500.00 |
| Premiums on bonds, repaid in part, . . . . . | | 9,727.79 |
| Advances, for accrued interest and expenses on bonds, repaid, . . . . . | | 2,502.35 |
| Improvements on **Adams** Estate, repaid in part, . | | 3,338.00 |
| " " **Bussey** Real Estate, repaid in part, | | 1,000.00 |
| " " **Gray** Estate, repaid in part, . . | | 4,819.27 |
| Loans to students, repaid, . . . . . | | 4,459.27 |
| Sundry repayments, . . . . . | | 9,946.18 |
| Reserved for the payment of certain bills for 1906–07 which were charged off but not paid during that year, . . . . . | 150.00 | 46,288.31 |
| Sale of Medical School property corner of Boylston and Exeter Streets, . . . . . | | 500,428.80 |
| Sale of Medical School land near Longwood Avenue, . . . . . | | 309,058.14 |
| Net rents of Medical School real estate, . . . . . | | 494.26 |
| Honoraria returned, . . . . . | | 75.00 |

| | | |
|---|---|---|
| **Bursar's Sundry Accounts.** | | |
| Receipts during the year. | | |
| On account of **Harvard** Dining Association, . | $207,049.96 | |
| " **Randall** Hall Association, . . | 80,933.41 | |
| On sundry accounts, . . . . . | 205,390.13 | 493,373.50 |
| Balance, August 1, 1906. | | |
| Cash in Adams Trust Co., . . . . . | $2,492.62 | |
| " City Trust Co., . . . . . | 40,342.41 | |
| " Equitable Trust Co., . . . . . | 3,311.42 | |
| " Merchants National Bank, . . . . . | 10,483.64 | |
| " National Shawmut Bank, . . . . . | 180.52 | |
| " National Union Bank, . . . . . | 1,517.37 | |
| " Old Boston National Bank, . . . . . | 29,491.67 | |
| " hands of Bursar, . . . . . | 40,518.71 | |
| Term Bills overdue, . . . . . | 50,966.46 | 179,304.82 |
| Total, . . . . . | | $6,181,510.98 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

INVESTMENTS AND SUNDRY PAYMENTS (*continued*).

Amount brought forward, . . . . . $5,439,827.86

SUNDRIES.

**Bursar's Sundry Accounts.**

| | | |
|---|---|---|
| Payments during the year. | | |
| On account of Harvard Dining Association, | $210,754.38 | |
| " Randall Hall Association, | 82,083.00 | |
| On sundry accounts, | 206,658.51 | 499,495.89 |
| **Balance, July 31, 1907.** | | |
| Cash in American Trust Co., | $2,228.97 | |
| " City Trust Co., | 80,132.02 | |
| " Equitable Trust Co., | 697.65 | |
| " Merchants National Bank, | 908.71 | |
| " National Union Bank, | 1,547.29 | |
| " Old Boston National Bank, | 67,580.93 | |
| " hands of Bursar, | 30,232.67 | |
| Term Bills overdue, | 58,858.99 | 242,187.23 |
| Total, | | $6,181,510.98 |

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## INVESTMENTS.

The following account exhibits the state of the property, as entered upon the Treasurer's books, July 31, 1907.

General Investments consist of Funds invested together; Special Investments, of Funds invested separately.

| | | |
|---|---|---|
| **Special Investments, Summary.** (For details see page 57.) | | |
| Public Funds, | $64,765.68 | |
| Railroad Bonds, | 364,715.39 | |
| Traction Bonds, | 29,543.75 | |
| Sundry Bonds, | 368,884.99 | |
| Railroad Stocks, | 233,447.87 | |
| Manufacturing and Telephone Stocks, | 4,885.00 | |
| Real Estate Trust Stocks, | 49,663.75 | |
| Sundry Stocks, | 275,300.00 | |
| University Houses and Lands, | 586,287.04 | |
| **Bussey** Real Estate, | 386,548.71 | |
| Other Real Estate, | 218,303.82 | |
| Mortgages and Notes, | 52,000.00 | |
| Deposits in Massachusetts Hospital Life Ins. Co., | 21,225.00 | |
| Cash in American Trust Co., | 2,228.97 | |
| " " Old Boston National Bank, | 2,000.00 | $2,659,799.97 |
| **General Investments.** | | |
| Mortgages and Notes. | | |
| Mortgages, | $550,000.00 | |
| American Tel. & Tel. Co.'s Note, | 50,000.00 | |
| New England Tel. & Tel. Co.'s Note, | 50,000.00 | |
| Hamilton Manufacturing Co.'s Note, | 50,000.00 | |
| Indian Head Mills of Alabama, Note, | 50,000.00 | |
| Personal Notes, with collateral, | 210,000.00 | |
| Western Electric Co.'s Note, | 50,000.00 | |
| York Manufacturing Co.'s Note, | 50,000.00 | 1,060,000.00 |
| Public Funds. | | |
| £3,500 Imperial Japanese Sterling 4½'s of 1925, | $15,334.55 | |
| $98,000 United States of Mexico 4's of 1954, | 91,250.00 | 106,584.55 |
| Railroad Bonds. | | |
| $100,000 Baltimore & Ohio 1st M. 4's of 1948, | $96,625.00 | |
| 100,000 B. & O. (S. W. Div.) 1st M. 3½'s of 1925, | 89,750.00 | |
| 100,000 Baltimore & Ohio (Pittsburg, Lake Erie & West Virginia) Ref. M. 4's of 1941, | 99,250.00 | |
| 125,000 Bangor & Aroostook Cons. Ref. M. 4's of 1951, | 118,750.00 | |
| 128,000 Burl. & Mo. in Nebr. non ex. 6's of 1918, | 128,000.00 | |
| 444,000 Chicago, Burl. & Quincy 3½'s of 1949, | 456,440.09 | |
| 200,000 C. B. & Q. (Illinois Div.) 4's of 1949, | 200,933.34 | |
| 100,000 Chicago & No. Western Gen. M. 3½'s of 1987, | 100,947.26 | |
| Amounts carried forward, | $1,290,695.69 | $3,826,384.52 |

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| | | | |
|---|---|---|---|
| | Amounts brought forward, . . | $1,290,695.69 | $3,826,384.52 |
| Railroad Bonds (*continued*). | | | |
| $100,000 | Chicago, Rock Island & Pacific Gen. M. 4's of 1988, . . . . . | 106,367.48 | |
| 100,000 | Chicago Terminal Transfer 1st M. 4's of 1947, . . . . . | 95,772.50 | |
| 100,000 | Chicago & Western Indiana Coll. Trust 5% Notes of 1910, . . . . . | 98,000.00 | |
| 100,000 | Indiana, Ill. & Iowa 1st M. 4's of 1950, | 96,500.00 | |
| 200,000 | Kansas City, Fort Scott & Memphis Cons. M. 6's of 1928, . . . . . | 240,551.73 | |
| 114,000 | Kansas City, Memphis & Birmingham (assented) Income 5's of 1934, . . . | 103,500.00 | |
| 100,000 | Lake Shore & Michigan Southern Deb. 4's of 1928, . . . . . | 95,000.00 | |
| 300,000 | Long Island Unified M. 4's of 1949, . . | 283,257.50 | |
| 200,000 | Louisville & Jeffersonville Bridge Co. 1st M. 4's of 1945, . . . . . | 191,000.00 | |
| 100,000 | Minneapolis Union 1st M. 5's of 1922, . | 101,997.47 | |
| 100,000 | Missouri Pacific 5% Notes of 1908, . . | 99,500.00 | |
| 100,000 | Montana Central 1st M. 6's of 1937, . . | 134,218.74 | |
| 50,000 | New York Central & H. R. 5% Notes of 1910, . . . . . | 49,875.00 | |
| 300,000 | New York Central & H. R. (L. S. & M. S. Coll.) 3½'s of 1998, . . . . . | 294,464.40 | |
| 5,000 | New York, New Haven & Hartford Convertible 3½'s of 1956, . . . . . | 5,605.86 | |
| 50,000 | New York, New Haven & Hartford Convertible 3½'s of 1956 (75% paid), . . | 43,687.50 | |
| 100,000 | New York, New Haven & Hartford Deb. 4's of 1955, . . . . . | 106,000.00 | |
| 200,000 | New York, Ontario & Western Ref. M. 4's of 1992, . . . . . | 209,848.71 | |
| 343,000 | Northern Pacific–Great Northern Joint 4's (C. B. & Q. Coll.) of 1921, . . . | 164,325.92 | |
| 100,000 | Oregon Short Line Cons. 1st M. 5's of 1946, . . . . . | 116,261.65 | |
| 100,000 | Oregon Short Line Ref. M. 4's of 1929, | 96,875.00 | |
| 69,000 | Pennsylvania Co. 3½'s of 1916, . . . . | 66,875.00 | |
| 250,000 | Richmond–Washington Co. Coll. Trust 4's of 1943, Series C, . . . . . | 255,974.40 | |
| 100,000 | St. Louis & San Francisco Ref. M. 4's of 1951, . . . . . | 97,125.00 | |
| £40,000 | St. Paul, Minneapolis & Manitoba (Pacific Extension) 4's of 1940, . . . . . | 201,253.67 | |
| $100,000 | Southern Pacific 1st Ref. M. 4's of 1955, | 97,062.50 | |
| 200,000 | Terminal R. R. Association of St. Louis Gen. M. Ref. 4's of 1953, . . . . . | 200,000.00 | |
| 400,000 | Union Pacific 1st M. & L. G. 4's of 1947, | 353,114.75 | 5,294,710.47 |
| | Amount carried forward, . . . . . | | $9,121,094.99 |

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| | Amount brought forward, . . . . . | | $9,121,094.99 |
| **Traction Bonds.** | | | |
| $150,000 | Boston & Northern Street R'y 1st M. Ref. 4's of 1954, . . . . . | $139,000.00 | |
| 100,000 | Central Crosstown Coll. Trust 5% Notes of 1909, . . . . . | 99,375.00 | |
| 200,000 | Interborough–Metropolitan Coll. Trust 4½'s of 1956, . . . . . | 191,000.00 | |
| 200,000 | Interborough Rapid Transit 4% Gold Notes of 1908, . . . . . | 195,299.38 | |
| 100,000 | Interborough Rapid Transit 5% Gold Notes of 1910, . . . . . | 97,250.00 | |
| 100,000 | Metrop. West Side Elevated 4's of 1938, | 91,746.25 | |
| 100,000 | " " " Ext. M. 4's of 1938, . . . . . | 97,000.00 | |
| 150,000 | Old Colony Street R'y 1st M. Ref. 4's of 1954, . . . . . | 139,000.00 | |
| 100,000 | Public Service Corporation of New Jersey 5% Coll. Gold Notes of 1909, . | 97,000.00 | |
| 100,000 | Second Ave. (N. Y.) Con. M. 5's of 1948, | 116,184.34 | |
| 200,000 | Third Avenue (N. Y.) 1st Consol. M. 4's of 2000, . . . . . | 202,288.65 | |
| 100,000 | United Traction & Electric Co. 1st M. 5's of 1933, . . . . . | 111,345.45 | 1,576,484.07 |
| **Sundry Bonds.** | | | |
| $200,000 | American Bell Tel. Co. 4's of 1908, . . | $200,508.28 | |
| 200,000 | American Tel. & Tel. Co. 4's of 1929, . | 196,000.00 | |
| 100,000 | Boston Electric Light Co. 1st Cons. M. 5's of 1924, . . . . . | 111,891.02 | |
| 145,000 | Broadway Realty Co. Purchase money 1st M. 5's of 1926, . . . . . | 154,433.02 | |
| 140,000 | Chicago Edison Co. 1st M. 5's of 1926, . | 145,517.60 | |
| 250,000 | Chicago Junction Railways and Union Stock Yards Coll. Trust 5's of 1915, . | 250,161.15 | |
| 100,000 | Chicago Junction Railways and Union Stock Yards 4's of 1940, . . . . . | 98,500.00 | |
| 100,000 | Detroit Edison Co. 1st M. 5's of 1933, . | 102,339.10 | |
| 100,000 | General Electric Convertible Deb. 5's of 1917 (subscription 50% paid), . . . | 56,032.50 | |
| 100,000 | Madison River Power Co. 1st M. 5's of 1935, . . . . . | 85,000.00 | |
| 100,000 | Metrop. Tel. & Tel. Co. 1st M. 5's of 1918, | 99,500.00 | |
| 100,000 | Minneapolis General Electric Co. Gen. M. 5's of 1934, . . . . . | 102,330.52 | |
| 100,000 | Montreal Light, Heat and Power Co. 1st M. Coll. Tr. 4½'s of 1932, . . . . . | 100,816.63 | |
| | Amounts carried forward, . . . | $1,703,029.82 | $10,697,579.06 |

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|---|---|---|---|
| | Amounts brought forward, . . | $1,703,029.82 | $10,697,579.06 |
| Sundry Bonds (*continued*). | | | |
| $100,000 | Municipal Gas & Electric Co. of Rochester, N. Y., 1st M. 4½'s of 1942, . . . | 100,000.00 | |
| 100,000 | New England Tel. & Tel. Co. 5's of 1916, | 108,470.56 | |
| 100,000 | North American Co. Coll. Trust 5% Notes of 1912, . . . . . | 93,625.00 | |
| 150,000 | Portland Gen'l Elec. 1st M. 5's of 1935, | 152,100.00 | |
| 100,000 | R'y & L't Secur. Coll. Tr. 5's of 1935, | 100,954.60 | |
| 160,000 | St. Louis National Stock Yards Co. 1st M. 4's of 1930, . . . . . | 157,650.00 | |
| 100,000 | Seattle Electric Co. 5% Notes of 1911, | 98,666.67 | |
| 50,000 | United Electric Securities Co. Coll. Trust S. F. 5's of 1935, 22d Series, | 51,327.58 | |
| 50,000 | United Electric Securities Co. Coll. Trust 5's of 1936, 24th Series, . . . | 50,000.00 | |
| 50,000 | Wood Worsted Mills Corp'n 4½% Cons. and Equip. Gold Notes of 1910, . . . | 49,500.00 | 2,665,324.23 |
| Railroad Stocks. | | | |
| 700 | shares Baltimore & Ohio, . . . . . | $70,362.50 | |
| 507 | " Chicago, Milwaukee & St. Paul, preferred (subscription 25% paid), . | 12,645.58 | |
| 1015 | " Chicago, Milwaukee & St. Paul, . . | 152,157.50 | |
| 253 | " " " " " " (subscription 25% paid), . . . . . | 6,293.44 | |
| 1625 | " Chicago & No. Western, . . . . . | 240,166.25 | |
| 955 | " Great Northern, preferred, . . . . . | 256,358.56 | |
| 382 | " " " " (55% paid), | 21,010.00 | |
| 955 | " " " Iron Ore Properties, | ..... | |
| 800 | " Louisville & Nashville, . . . . . | 93,925.00 | |
| 700 | " Manhattan, . . . . . | 92,762.50 | |
| 1665 | " New York Central & Hudson River, . | 108,873.21 | |
| 418 | " New York, New Haven & Hartford, . | 74,693.86 | |
| 500 | " Northern Pacific, . . . . . | 64,537.50 | |
| 4771 | " Pennsylvania, . . . . . | 309,500.30 | 1,503,286.20 |
| Manufacturing and Telephone Stocks. | | | |
| 2000 | shares American Smelters Securities Co. 5% cumulative, preferred, series B, . . . . . | $196,000.00 | |
| 700 | shares American Tel. & Tel. Co., . . . . . | 98,500.38 | |
| 620 | " " " " " (subscrip'n), | 32,110.14 | |
| 12 | " Amoskeag Manufacturing Co., . . . | 8,654.00 | |
| 300 | " General Electric Co., . . . . . | 42,037.50 | |
| 187 | " Merrimack Manufacturing Co., . . . | 18,615.10 | |
| 24 | " Pacific Mills, . . . . . | 16,668.29 | 407,585.41 |
| Real Estate Trust Stocks. | | | |
| 1000 | shares Barristers Hall, . . . . . | $92,766.00 | |
| 2500 | " Department Store, . . . . . | 220,291.88 | |
| | Amounts carried forward, . . | $313,057.88 | $15,273,774.90 |

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|---|---|---|
| Amounts brought forward, . . . | $313,057.88 | $15,273,774.90 |
| **Real Estate Trust Stocks (*continued*).** | | |
| 1000 shares Essex Street, . . . . . | 100,000.00 | |
| 750 " Kimball Building, . . . . . | 75,000.00 | |
| 1089 " Paddock Building, . . . . . | 104,363.72 | |
| 1000 " Post Office Square Building, . . . . | 103,000.00 | 695,421.60 |
| **Sundry Stocks.** | | |
| 500 shares Edison Elec. Illum. Co., Boston, Mass., | $101,062.50 | |
| 1500 " Massachusetts Gas Companies, pref'd, | 132,107.00 | 233,169.50 |
| **Real Estate in Boston.** | | |
| Adams Estate, Washington Street, . . . . . | $271,697.02 | |
| Amory Estate, Franklin Street, . . . . . | 165,615.81 | |
| Cowdin Estate, Haymarket Square, . . . . . | 36,000.00 | |
| Estate, 20 and 21 Haymarket Square, . . . . . | 58,913.52 | |
| Faneuil Hall Square Estate, . . . . . | 107,047.80 | |
| Gerrish Block, Blackstone and North Streets, . . | 192,875.75 | |
| Gray Estate, Washington Street, . . . . . | 973,806.15 | |
| Lowell Estate, Washington Street, . . . . . | 464,368.91 | |
| Old Boston Music Hall Estate, . . . . . | 356,611.00 | |
| Townsend Estate, Hawkins Street, . . . . . | 44,569.49 | |
| Webb Estate, Washington Street, . . . . . | 164,604.79 | 2,836,110.24 |
| **Sundries.** | | |
| Advances to Antitoxin Laboratory, . . . . . | $404.89 | |
| " **Bussey** Trust, . . . . . | 348,227.21 | |
| " **Calvin & Lucy Ellis** Real Estate, | 402.02 | |
| " Dental School Real Estate, . . . . | 87.58 | |
| " Medical School, . . . . . | 6,373.03 | |
| " Observatory, . . . . . | 1,024.63 | |
| " **Peabody** Museum of American Archaeology and Ethnology, . . | 2,774.22 | |
| " Botanic Department, . . . . . | 7,352.39 | |
| " **Harvard** Dining Association, . . | 173,295.30 | |
| " **Randall** Hall Association, . . . . | 29,702.27 | |
| " **Uriah A. Boyden** Fund, . . . | 9,030.62 | |
| " Classical Publication Fund of the **Class of 1856,** . . . . . | 1,750.82 | |
| " Woodland Hill Fund, . . . . . | 2,875.65 | |
| " Stadium, . . . . . | 31,019.13 | |
| " Sundry Accounts, . . . . . | 1,895.66 | |
| | $616,215.42 | |
| Term Bills overdue, . . . . . | 58,858.99 | 675,074.41 |
| Cash in City Trust Co., . . . . . | $80,132.02 | |
| " Equitable Trust Co., . . . . . | 697.65 | |
| " Merchants National Bank, . . . . . | 908.71 | |
| " National Union Bank, . . . . . | 1,547.29 | |
| " Old Boston National Bank, . . . . . | 65,580.93 | |
| " hands of Bursar, . . . . . | 30,232.67 | 179,099.27 |
| Total, . . . . . | | $19,892,649.92 |

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## SPECIAL INVESTMENTS IN DETAIL.

Any Fund separately invested, wholly, or in part, except Funds in "University Houses and Lands," is kept so either because the giver restricted its investment, even in some cases having selected the securities, or because the gift establishing the Fund, or adding to it, was received in securities, or in other kinds of property, which have not yet been sold for reinvestment with General Investments.

The Special Investments are summarized on page 52. The Funds separately invested for each Department and the income are as follows: —

| UNIVERSITY. | Principal, July 31, 1907. | Income. |
|---|---|---|
| **John W. Carter,** | | |
| University Houses and Lands, | $12,500.00 | $369.09 |
| **George B. Dorr,** | | |
| University Houses and Lands, | 115,966.56 | 3,424.21 |
| **George Draper,** | | |
| University Houses and Lands, | 48,458.50 | 1,430.86 |
| **Robert H. Eddy,** | | |
| University Houses and Lands, | 56,787.00 | 1,676.78 |
| **John Davis Williams French,** | | |
| University Houses and Lands, | 5,322.09 | 157.15 |
| **John C. Gray,** | | |
| University Houses and Lands, | 25,000.00 | 738.19 |
| **Walter Hastings,** | | |
| Real Estate, Sacramento St., Cambridge, | 20,000.00 | 728.48 |
| Insurance and Guaranty, | | |
| Real Estate, Lucas St., Boston, | 4,000.00 | |
| **Joseph Lee,** | | |
| University Houses and Lands, | 10,000.00 | 295.27 |
| **Henry S. Nourse** (part), | | |
| 25 shares Brookside Mills (sold during year), | | 87.50 |
| 40 " Missouri Zinc Fields Co., | 120.00 | |
| **Francis E. Parker,** | | |
| University Houses and Lands, | 113,817.44 | 3,360.75 |
| **Henry L. Pierce** (Residuary) (part), | | |
| University Houses and Lands, | 48,435.45 | 1,095.29 |
| **Riverside,** | | |
| 6 shares Harvard Riverside Associates, | 6,000.00 | |
| **Henry Villard,** | | |
| University Houses and Lands, | 50,000.00 | 1,476.38 |
| **William F. Weld,** | | |
| University Houses and Lands, | 100,000.00 | 2,952.76 |
| Amounts carried forward, | $616,407.04 | $17,792.71 |

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|---|---|---|
| Amounts brought forward, . . . . . | $616,407.04 | $17,792.71 |
| **COLLEGE.** | | |
| **Daniel A. Buckley** (part), | | |
| Real Estate in Cambridge, Mass., . . . . . | 70,223.31 | 7,637.45 |
| " " Deer Isle, Me., . . . . . | 1.00 | |
| **Edward W. Codman** (part), | | |
| $5,000 Kansas City, Fort Scott & Memphis R. R. Cons. M. 6's of 1928, . . . . . | 6,250.00 | 300.00 |
| 5,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 4,816.25 | 200.00 |
| 2 shares Pacific Mills, . . . . . | 4,600.00 | 640.00 |
| 15 " Barristers Hall Trust, . . . . . | 1,085.00 | 45.00 |
| 11 " Boston Real Estate Trust, . . . . . | 13,225.00 | 495.00 |
| 25 " Central Building Trust, . . . . . | 2,375.00 | 100.00 |
| Mortgage on real estate in Nahant, Mass. (paid during year), . . . . . | | 122.78 |
| **Edward Erwin Coolidge** Fund, | | |
| 200 shares U. S. Smelting, Refining & Mining Co., | 9,000.00 | 700.00 |
| **T. Jefferson Coolidge,** for Research in Physics, | | |
| 625 shares Massachusetts Electric Co., cum. pref'd, | 57,500.00 | |
| **Eliot** Professorship (**Jon. Phillips's** Gift), | | |
| $10,000 City of Boston 3½'s of 1920, . . . . . | 10,000.00 | 350.00 |
| Professorship of Hygiene (part), | | |
| Policy of Mass. Hospital Life Insurance Co., . . | 5,000.00 | 200.00 |
| $16,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 15,681.85 | 640.00 |
| **Charles Eliot Norton** Fellowship, | | |
| $15,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 14,100.00 | 600.00 |
| **George Foster Peabody** Scholarship, | | |
| $6,000 Mexican Coal & Coke Co. 1st M., S. F. 5's of 1926, . . . . . | 4,800.00 | 300.00 |
| **William Reed** Scholarship, | | |
| 1,000 New York Central & H. R. Gold 3½'s of 1997, | 1,000.00 | 17.50 |
| 1,000 Norfolk and Western Divisional 1st lien & gen. M. 4's of 1944, . . . . . | 1,000.00 | 20.00 |
| $2,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 2,000.00 | 40.00 |
| **Nelson Robinson Jr.** Additional, | | |
| 1,750 shares Gauley Coal Land Co. preferred, . . | 175,000.00 | |
| **Dunlap Smith** Scholarship, | | |
| $5,000 Metropolitan West Side Elevated R. R. Extension M. 4's of 1938, . . . . . | 4,700.00 | 200.00 |
| Amounts carried forward, . . . . . | $1,018,764.45 | $30,400.44 |

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|---|---|---|
| Amounts brought forward, . . . . . | $1,018,764.45 | $30,400.44 |
| **Stoughton** Scholarship (part), | | |
| Real Estate in Dorchester, . . . . . | 1,294.30 | 100.00 |
| **Sarah E. Potter** Fund (part), | | |
| 33 shares Pureoxia Co., . . . . . | 165.00 | |
| Teachers' Endowment (part), | | |
| Broadway Realty Co. Purchase Money, 2d M. 5's of 1916, . . . . . | 5,000.00 | 250.00 |
| $50,000 Wisconsin Central, Minneapolis Terminal Purchase Money M. 3½'s of 1950, . . . . . | 50,000.00 | 1,750.00 |
| 10 shares **Harvard** Riverside Associates, . . . . | 10,000.00 | |
| **Wales** Professorship of Sanskrit, | | |
| Real Estate, Cornhill, Boston, . . . . . | 40,000.00 | 1,700.02 |
| **Samuel Ward's** Gift (part), | | |
| **Ward's** (Bumkin) Island, Boston Harbor, . . . | 1.00 | |
| LIBRARY. | | |
| **Ichabod Tucker** (part), | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 5,000.00 | 200.00 |
| **William R. Castle,** | | |
| $1,000 Honolulu Gas Co., Limited, 6's of 1925, . . | 1,000.00 | |
| LAW SCHOOL. | | |
| **James Barr Ames** Prize (part), | | |
| Personal Note, . . . . . | 2,000.00 | |
| MEDICAL SCHOOL. | | |
| **Calvin and Lucy Ellis** (part), | | |
| 40,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 26,585.00 | 1,600.00 |
| Real Estate in Boston (half), . . . . . | 22,500.00 | 88.00 |
| Real Estate in Eden, Bar Harbor, Maine, . . . . | 10,000.00 | |
| **George C. Shattuck** (part), | | |
| $25,000 Kansas City, Fort Scott & Memphis R. R. Cons. M. 6's of 1928 ($203.70 deducted from income for sinking premium), . . . . . | 29,277.80 | 1,296.80 |
| OBSERVATORY. | | |
| Advancement of Astronomical Science (1902) (part), | | |
| $5,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 4,800.00 | 200.00 |
| 15 shares Calumet & Hecla Mining Co., . . . . . | 9,000.00 | 1,200.00 |
| Amounts carried forward, . . . . . | $1,235,387.55 | $38,784.76 |

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| Amounts brought forward, . . . . . | $1,235,387.55 | $38,784.76 |

PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY.

| | | |
|---|---|---|
| **Peabody Building** (part), $54,000 Kansas & Missouri R. R. 1st M. 5's of 1922, | 11,512.72 | 622.32 |
| **Peabody Collection** (part), $54,000 Kansas & Missouri R. R. 1st M. 5's of 1922, | 19,218.64 | 1,038.84 |
| **Peabody Professor** (part), $54,000 Kansas & Missouri R. R. 1st M. 5's of 1922, | 19,218.64 | 1,038.84 |
| **Thaw** (part) ($8.47 deducted from income for sinking premium), | | |
| $20,000 Girard Point Storage Co. 1st M. 3½'s of 1940, | 20,279.67 | 691.53 |

ARNOLD ARBORETUM.

| | | |
|---|---|---|
| **Robert Charles Billings,** | | |
| $5,000 Butte Water Co. 1st M. 5's of 1921, . . . . | 4,000.00 | 250.00 |

BUSSEY INSTITUTION.

| | | |
|---|---|---|
| Woodland Hill, | | |
| Laboratory of Comparative Pathology building, . | 17,783.21 | 1,000.00 |

SPECIAL FUNDS.

| | | |
|---|---|---|
| **Bussey** Trust (part), | | |
| Real Estate in Boston, . . . . . | 386,548.71 | 14,754.94 |
| Fund of the **Class of 1834,** | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 1,000.00 | 40.00 |
| Fund of the **Class of 1844,** | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 6,500.00 | 260.00 |
| Fund of the **Class of 1853,** | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 3,725.00 | 149.00 |
| **Calvin** and **Lucy Ellis** Aid (part), | | |
| Real Estate in Boston (half), . . . . . | 22,500.00 | 87.99 |
| **Charles L. Hancock** Bequest (part), | | |
| Real Estate in Chelsea, . . . . . | 1.00 | |
| **Robert Troup Paine** (accumulating) ($187.38 deducted from income for sinking premiums), | | |
| $38,000 Massachusetts 3½'s of 1913, . . . . . | 38,940.88 | 1,185.25 |
| 5,000 " " 1916, . . . . . | 5,187.70 | 154.15 |
| 6,000 " " 1935, . . . . . | 6,305.91 | 199.08 |
| 4,000 " " 1938, . . . . . | 4,331.19 | 129.14 |
| **George Smith** Bequest (part), | | |
| $10,000 Du Quoin, Ill., Water Works Co. 6's of 1901, . . . . . | 1.00 | |
| 20,000 Laclede Gas Light Co. 5's of 1919, . . . | 20,000.00 | 1,000.00 |
| 32,000 United States Steel Corporation 5's of 1963, | 24,000.00 | 1,600.00 |
| 200 shares Laclede Gas Light Co., preferred, . . | 18,800.00 | 1,000.00 |
| Amounts carried forward, . . . . | $1,865,241.82 | $63,985.84 |

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| | Amounts brought forward, . . . . . | $1,865,241.82 | $63,985.84 |
| **Price Greenleaf.** | ($384.52 deducted from income for sinking premiums.) The total amount of this Fund is $792,478.15, which is invested as follows: — | | |
| $70,000 | American Bell Telephone Co. 4's of 1908, | 70,128.95 | 2,671.05 |
| 70,000 | Broadway Realty Co. Purchase money 1st M. 5's of 1926, . . . . . | 73,592.04 | 3,315.80 |
| 16,000 | Burl. & Mo. R. R. R. in Neb. non ex. 6's of 1918, . . . . . | 16,000.00 | 1,110.00 |
| 25,000 | Central Crosstown Coll. Trust 5% Notes of 1909, . . . . . | 24,843.75 | 1,250 |
| 43,500 | Central Vermont R'y 1st M. 4's of 1920, . | 37,845.00 | 1,740.00 |
| 3,000 | Chicago, Burl. & Quincy R. R. 4's of 1922, | 2,880.00 | 120.00 |
| 50,000 | Chicago Junction Railways & Union Stock Yards Coll. Trust 5's of 1915, . . . . . | 47,000.00 | 2,500.00 |
| 8,000 | Kansas City, Fort Scott & Memphis cons. M. 6's of 1928, . . . . . | 9,498.84 | 408.63 |
| 50,000 | Metropolitan Tel. & Tel. Co. 1st M. 5's of 1918, . . . . . | 49,750.00 | 2,500.00 |
| 34,000 | New York Central & Hudson River R. R. (Michigan Central Collateral) 3½'s of 1998, | 28,412.10 | 1,190.00 |
| 32,000 | Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . | 19,993.55 | 1,280.00 |
| 50,000 | Seattle Electric Co. 5% Notes of 1911, . . | 49,333.33 | 2,409.72 |
| 50,000 | Union Pacific R.R. 1st M. & L.G. 4's of 1947, | 44,625.00 | 2,000.00 |
| 50,000 | Note of Massachusetts Cotton Mills, . . . | 50,000.00 | 2,437.50 |
| 360 shares | Boston & Lowell R. R., . . . . . | 46,800.00 | 2,880.00 |
| 237 " | Fitchburg R. R., preferred, . . . . . | 22,306.27 | 1,185.00 |
| 40 " | Great Northern, preferred, . . . . . | 11,525.00 | 280.00 |
| 16 " | " " " (55% paid), | 880.00 | |
| 40 " | " " Iron Ore Properties, | ..... | |
| 355 " | Old Colony R. R., . . . . . | 63,190.00 | 2,485.00 |
| 27 " | N. Y. Central & Hudson River R. R., . | 2,866.28 | 144.25 |
| 290 " | Northern R. R. (N. H.), . . . . . | 29,290.00 | 1,740.00 |
| 52 " | West End Street Railway, preferred, . | 4,305.56 | 208.00 |
| 84 " | Central Vermont R'y, . . . . . | 428.72 | |
| 707 " | Pennsylvania R. R., . . . . . | 51,856.04 | 2,474.50 |
| 17 " | Boston Real Estate Trust, . . . . . | 22,978.75 | 765.00 |
| 100 " | Paddock Building Trust, . . . . . | 10,000.00 | 350.00 |
| Cash in | American Trust Co., . . . . . | 2,228.97 | 46.15 |
| " | City Trust Co. (withdrawn during year), | | 40.71 |
| " | Old Boston National Bank, . . . . . | 2,000.00 | |
| | Totals of special investments, . . . | $2,659,799.97 | $101,517.15 |

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## FUNDS AND BALANCES.

The foregoing property represents the following Funds and balances, and is answerable for the same.

[The date following the title of a Fund shows the year of its establishment.]

| Principal, Aug. 1, 1906. | UNIVERSITY FUNDS. | Principal, July 31, 1907. | |
|---|---|---|---|
| $1,143.00 | Band Music (1903), | $1,143.00 | |
| 2,000.00 | **William H. Baldwin, Jr.** (1906), | 2,000.00 | |
| 4,950.00 | **Andrew Bigelow** (1898), | 4,950.00 | |
| 5,000.00 | **Stanton Blake** (1899), | 5,000.00 | |
| 4,771.33 | **Charlotte F. Blanchard** (1891), | 4,771.33 | |
| 5,250.00 | **Samuel D. Bradford** (1866), | 5,250.00 | |
| | **Martin Brimmer** Fund (1907), | 50,000.00 | |
| 100,000.00 | **James C. Carter** (1906), | 100,000.00 | |
| 12,500.00 | **John W. Carter** (1898), | 12,500.00 | |
| | **Edward Erwin Coolidge** (1906), | 9,200.00 | |
| 154.82 | **Thomas Cotton** (1727), | 155.08 | |
| 33,835.06 | **John Cowdin** (1888), | 33,835.06 | |
| 115,966.56 | **George B. Dorr** (1882), | 115,966.56 | |
| 48,458.50 | **George Draper** (1892), | 48,458.50 | |
| 56,787.00 | **R. H. Eddy** (1901), | 56,788.00 | |
| 101,225.49 | **Harvard Ellis** (1895), | 101,225.49 | |
| 25,000.00 | **Richard W. Foster** (1905), | 25,000.00 | |
| 5,322.09 | **John Davis Williams French** (1901), | 5,322.09 | |
| 20,571.18 | **Gore** (1834), | 20,571.18 | |
| 25,000.00 | **John C. Gray** (1881), | 25,000.00 | |
| 20,000.00 | **Walter Hastings** (1888), | 20,000.00 | |
| 20,000.00 | **Henry L. Higginson** (1906), | 20,000.00 | |
| 5,000.00 | **George Baxter Hyde** (1895), | 5,000.00 | |
| 4,000.00 | Insurance and Guaranty (1860), | 4,000.00 | |
| 16,871.63 | **Leonard Jarvis** (1859), | 16,871.63 | |
| 10,000.00 | **Henry P. Kidder** (1894), | 10,000.00 | |
| 10,000.00 | **Joseph Lee** (1802), | 10,000.00 | |
| 10,000.00 | **Theodore Lyman** (1898), | 10,000.00 | |
| 81,950.54 | **Henry T. Morgan** (1883), | 81,950.54 | |
| 15,750.00 | **Israel Munson** (1844), | 15,750.00 | |
| 48,972.49 | **Henry S. Nourse** (1904), | 50,557.37 | |
| 113,817.44 | **Francis E. Parker** (1886), | 113,817.44 | |
| 30,000.00 | **William Perkins** (1888), | 30,000.00 | |
| 50,217.37 | **Henry L. Pierce** (1898), | 51,084.23 | |
| 178,183.71 | **Henry L. Pierce** (Residuary) (1898), | 161,470.07 | |
| 63,640.31 | President's (1883), | 63,743.28 | |
| 366,416.47 | Retiring Allowance (1879), | 366,416.47 | |
| 6,000.00 | Riverside (1903), | 6,000.00 | |
| 23,370.03 | **John L. Russell** (1889), | 23,370.03 | |
| 1,962.53 | **Mary R. Searle** (1903), | 1,971.95 | |
| 46,913.13 | **Isaac Sweetser** (1894), | 46,913.13 | |
| 5,000.00 | **Seth Turner** (1883), | 5,000.00 | |
| 100,000.00 | **William F. Weld** (1893), | 100,000.00 | $1,841,052.43 |
| $1,796,000.68 | . . Amounts carried forward, | | $1,841,052.43 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $1,796,000.68 | . . Amounts brought forward, . . . . . | | $1,841,052.43 |
| | COLLEGE FUNDS.* | | |
| 10,780.42 | **John W. P. Abbot** (1874), . . . | 11,309.72 | |
| 27,748.64 | **Alford** Professorship (1765), . . . | 27,748.64 | |
| 7,806.86 | **Daniel Austin** (1879), . . . . . | 7,806.86 | |
| 5,787.61 | **William H. Baldwin, Jr. 1885** (1906), . . . . . | 5,787.61 | |
| 15,000.00 | **Robert Charles Billings,** for **Gray** Herbarium (1903), . . . . | 15,000.00 | |
| 1,050.00 | **John A. Blanchard** (1873), . . | 1,050.00 | |
| 39,780.00 | Botanic Department (1880), . . . . | 39,780.00 | |
| 28,337.40 | **Boylston** Professorship (1772), . . | 28,337.40 | |
| | Centennial Fund for the Botanic Garden (1907), . . . . . | 850.00 | |
| 11,610.52 | **Francis James Child** Mem. (1897), | 11,637.55 | |
| 7,105.12 | Classical Publication Fund of the **Class of 1856** (1888), . . . . | 7,105.12 | |
| 103,669.41 | **Class of 1880** (1905), . . . . . | 103,669.41 | |
| | Fund of the **Class of 1882** (1907), | 53,863.36 | |
| 150,617.54 | Class Subscription (1870), . . . . . | 150,637.54 | |
| 322,158.89 | **Edward W. Codman** (1905), . . | 322,158.89 | |
| 57,969.66 | **T. Jefferson Coolidge,** for Research in Physics, . . . . . | 57,703.85 | |
| 1,900.49 | Cryptogamic Herbarium (balance), . | 2,388.79 | |
| 3,768.73 | **Paul Dudley** (1751), . . . . . | 3,853.79 | |
| 106,516.38 | **Eaton** Professorship (1903), . . . | 106,746.32 | |
| 21,619.50 | **Eliot** Professorship (1814), . . . . | 21,619.50 | |
| 10,000.00 | **Eliot** " (**Jon. Phillips'** gift) (1854), . . . . . | 10,000.00 | |
| 3,500.01 | **Erving** Professorship (1791), . . . | 3,500.01 | |
| 35,990.99 | **Fisher** " (1834), . . . | 35,990.99 | |
| 419.24 | **Henry Flynt** (1760), . . . . . | 434.24 | |
| 16,240.38 | Fund for Permanent Tutors (1796), | 16,240.38 | |
| 1,033.57 | Fund for Religious Services (1887), . | 1,033.57 | |
| | German Professorship (1907), . . . | 350.00 | |
| 13,556.84 | **Godkin** Lectures (1903), . . . . . | 14,222.49 | |
| 6,950.72 | Gospel Church (1868), . . . . . | 7,121.37 | |
| 1,734.70 | **Gray** Herbarium (balance), . . . . | 278.47 | |
| 32,611.00 | **Asa Gray** Memorial (1898), . . . | 32,611.00 | |
| 21,608.04 | **Asa Gray** Professorship of Systematic Botany (1897), . . . . . | 21,644.50 | |
| 196,677.45 | **Gurney** (1888), . . . . . | 196,934.29 | |
| 5,538.35 | **George Silsbee** and **Ellen Sever Hale** (1904), . . . . . | 5,610.27 | |
| 15,101.99 | **Harvard** Oriental Series (1899), . . | 15,218.85 | |
| 20,655.91 | Herbarium (1865), . . . . . | 20,655.91 | |
| $3,100,847.04 | . . Amounts carried forward, . . . | $1,360,900.69 | $1,841,052.43 |

* Including some actually used in the Graduate Schools.

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $3,100,847.04 | . . Amounts brought forward, . . . | $1,360,900.69 | $1,841,052.43 |
| 20,217.08 | **Hersey** Professorship (1772), . . . | 20,217.08 | |
| 21,744.18 | **Hersey** Professorship (**Thomas Lee's** gift) (1856), . . . . . | 21,744.18 | |
| 34,517.60 | **Hollis** Professorship of Divinity (1721), | 34,517.60 | |
| 3,747.33 | **Hollis** " of Mathematics (1726), | 3,747.33 | |
| 5,981.12 | **Ingersoll** Lecture (1894), . . . . | 6,007.29 | |
| 1,984.53 | **Jefferson** Physical Lab'y (balance), | 1,866.76 | |
| 10,881.95 | Lectures on Political Economy (1889), | 10,806.26 | |
| 15,796.97 | **Lee** Fund for Reading (1863), . . . | 15,796.97 | |
| 110,083.71 | **Henry Lee** Professorship (1900), . | 109,988.84 | |
| 8,022.97 | **Joseph Lovering** for Physical Research (1891), . . . . . | 8,349.32 | |
| 66,407.31 | **Lowell** Fund for a Botanic Garden (1882) (formerly Professorship of Natural History, 1805), . . . . . | 66,407.31 | |
| 25,000.00 | **Arthur T. Lyman** (1904), . . . | 25,000.00 | |
| 43,062.93 | **McLean** Professorship (1834), . . | 43,062.93 | |
| 1,086.62 | Music Department (1903), . . . . . | 1,189.99 | |
| 24,534.86 | **William Belden Noble** Lectures (1898), . . . . . | 25,739.53 | |
| 104,398.89 | **Francis Greenwood Peabody** Endowment (1905), . . . . . | 105,729.75 | |
| 14,334.00 | **Daniel H. Peirce** (1876), . . . . | 14,404.38 | |
| 21,000.00 | **Perkins** Professorship (1841), . . | 21,000.00 | |
| 31,500.00 | **Jonathan Phillips** (1861), . . . | 31,500.00 | |
| 75,000.00 | Physical Laboratory Endowm't (1881), | 75,000.00 | |
| 25,020.19 | **Plummer** Foundation (1854), . . | 25,020.19 | |
| 52,500.00 | **Pope** Professorship (1868), . . . . | 52,500.00 | |
| | **Sarah E. Potter** Endowment Fund, | 50,165.00 | |
| 238,202.91 | Professorship of Hygiene (1899), . . | 246,392.60 | |
| 525,000.00 | **Nelson Robinson, Jr.** (1899), . | 530,000.00 | |
| 175,000.00 | **Nelson Robinson, Jr.** Additional (1906), . . . . . | 199,262.34 | |
| 56,368.73 | **Rumford** Professorship (1819), . . | 56,368.73 | |
| 2,000.00 | **John L. Russell** (1889), . . . . | 2,000.00 | |
| 60,000.00 | **Gurdon Saltonstall** (1901), . . | 60,000.00 | |
| 4,815.21 | **George William Sawin** (1890), | 4,805.09 | |
| 5,118.50 | **Robert W. Sayles** (1906), . . . | 5,364.40 | |
| 1,962.16 | School for Social Workers (balance), (1904), . . . . . | 424.34 | |
| 23,139.83 | **Smith** Professorship (1816), . . . | 23,139.83 | |
| 2,500.00 | **William M. Spackman** (1905), | 2,500.00 | |
| 12,560.17 | **Josiah Stickney** (1899), . . . . | 11,791.87 | |
| 1,846,394.10 | Teachers' Endowment (1905), . . . | 1,933,120.48 | |
| 16,655.01 | **John E. Thayer** (1885), . . . . | 16,317.44 | |
| 1,047.79 | **Elizabeth Torrey** (1896), . . . | 1,084.55 | |
| 11,584.47 | **Henry Warren Torrey** (1890), . | 11,313.80 | |
| $6,799,968.16 | . . Amounts carried forward, . . . | $5,234,496.87 | $1,841,052.43 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $6,799,968.16 | . . Amounts brought forward, . . . | $5,234,496.87 | $1,841,052.43 |
| 89,368.98 | Twenty-fifth Anniversary Fund of the **Class of 1881** (1906), . . . . . | 99,965.41 | |
| 101,972.21 | **Unknown** Memorial (1898), . . . | 101,645.42 | |
| 50,000.00 | **Henry Villard** (1902), . . . . . | 50,000.00 | |
| 40,000.00 | **Wales** Professorship (1903), . . . | 40,000.00 | |
| 17,003.02 | **Samuel Ward** (1680), . . . . . | 17,837.82 | |
| 6,492.03 | **Cyrus M. Warren** (1893), . . . | 6,526.83 | |
| 115,167.01 | **Henry C. Warren** (1899), . . . | 116,821.71 | |
| 6,440.89 | **Sylvester Waterhouse** (1896), . | 6,757.14 | |
| 50,000.00 | **Increase Sumner Wheeler** (1889), | 50,000.00 | |
| 32.50 | **Jerome Wheelock** (1903), . . . | 44.42 | |
| 1,127.10 | **Chauncey Wright** (1884), . . . | 1,182.44 | |
| | GIFTS FOR SPECIAL USE (BALANCES). | | |
| 3,319.93 | For Equipment for the Department of Architecture, . . . . . | 1,385.33 | |
| 1,890.19 | Bermuda Biological Station, . . . | 914.96 | |
| 1,183.82 | Cases, etc., at the Botanic Garden, | 702.57 | |
| 257.07 | Classical Library, . . . . . | 136.89 | |
| 322.52 | Collections for a Germanic Museum, | 322.52 | |
| .13 | Electrical Apparatus, . . . . . | .13 | |
| 1,512.34 | The study of Social Ethics, . . . . | | |
| 931.48 | Furnishings of the Department of Social Ethics, . . . . . | 814.51 | |
| 715.86 | Furnishing Emerson Hall, . . . . | 173.07 | |
| 756.45 | Philosophical Library, . . . . . | 784.35 | |
| 10.65 | Physical Research, . . . . . | 1,404.72 | |
| 3,445.11 | Plantation of Shrubs, etc., . . . . | 3,514.01 | |
| 1,125.00 | Salaries, . . . . . | 1,125.00 | |
| 521.88 | Sanskrit Department, . . . . . | 1,115.01 | |
| 261.35 | Semitic Library, . . . . . | 1,018.01 | |
| 1,477.38 | Sugar-cane investigation, etc., . . | 970.95 | |
| 3,460.57 | Sundry Gifts(balances), . . . . . | 3,927.43 | |
| | FELLOWSHIP FUNDS. | | |
| 20,157.98 | **Julia Amory Appleton** (1906), | 19,647.74 | |
| 5,348.73 | **George W. Dillaway** (1903), . . | 5,461.37 | |
| 11,395.46 | **Ozias Goodwin** Memorial (1889), | 11,729.96 | |
| 10,923.96 | **Harris** (1868), . . . . . | 10,960.33 | |
| 26,114.41 | **Edward William Hooper**(1905), | 25,646.61 | |
| 11,450.94 | **John Thornton Kirkland**(1871), | 11,113.18 | |
| 11,963.64 | **Henry Lee** Memorial (1889), . . | 12,101.07 | |
| 14,114.22 | **Charles Eliot Norton** (1901), . | 14,114.91 | |
| 13,104.76 | **Robert Treat Paine** (1887), . . | 13,248.22 | |
| 59,068.27 | **John Parker** (1873), . . . . . | 59,718.51 | |
| 10,296.25 | **Francis Parkman** (1906), . . . | 10,351.78 | |
| 32,705.83 | **Rogers** (1869), . . . . . | 33,224.19 | |
| $7,525,408.08 | . . Amounts carried forward, . . . | $5,970,905.39 | $1,841,052.43 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $7,525,408.08 | . . Amounts brought forward, . . . | $5,970,905.39 | $1,841,052.43 |
| 12,242.70 | **Henry Bromfield Rogers** Memorial (1889), . . . . . | 12,393.83 | |
| 50.00 | South End House (balance), . . . . | 50.00 | |
| 11,970.27 | **John Tyndall** (1885), . . . . . | 12,058.00 | |
| 11,566.14 | **James Walker** (1881), . . . . . | 11,634.03 | |
| 23,849.85 | **Whiting** (1896), . . . . . | 24,420.88 | |
| | SCHOLARSHIP FUNDS. | | |
| 3,847.84 | **Abbot** (1852), . . . . . | 3,886.78 | |
| 2,277.70 | **Alford** (1785), . . . . . | 2,389.55 | |
| 5,406.14 | **Bartlett** (1881), . . . . . | 5,421.57 | |
| 5,681.66 | **Bassett** (1876), . . . . . | 5,690.65 | |
| 13,488.96 | **Bigelow** (1865), . . . . . | 13,546.04 | |
| 2,844.90 | **Samuel A. Borden** (1896), . . . | 2,984.59 | |
| 114,843.68 | **Bowditch** (1864), . . . . . | 115,482.52 | |
| 3,773.92 | **Bright** (balance), . . . . . | 4,061.72 | |
| 3,919.87 | **Browne** (1687), . . . . . | 3,962.34 | |
| 5,443.20 | **Morey Willard Buckminster** (1898), . . . . . | 5,510.45 | |
| 34,291.39 | **Burr** (1895), . . . . . | 34,775.08 | |
| 6,180.47 | **Ruluff Sterling Choate** (1884), | 6,208.91 | |
| 8,502.56 | **Class of 1802** (1870), . . . . . | 8,595.06 | |
| 3,275.78 | " **1814** (1853), . . . . . | 3,311.68 | |
| 6,729.12 | " **1815 (Kirkland)** (1852), | 6,809.51 | |
| 4,684.24 | " **1817** (1852), . . . . . | 4,739.22 | |
| 3,546.42 | " **1828** (1882), . . . . . | 3,570.53 | |
| 5,114.66 | " **1835** (1853), . . . . . | 5,180.81 | |
| 5,251.44 | " **1841** (1871), . . . . . | 5,309.26 | |
| 5,250.21 | " **1852 (Dana)** (1876), . . | 5,307.98 | |
| 16,119.27 | " **1856** (1885), . . . . . | 16,310.71 | |
| 4,876.13 | " **1867** (1886), . . . . . | 4,940.54 | |
| 5,206.54 | " **1877** (1902), . . . . . | 5,262.20 | |
| 6,132.52 | " **1883** (1900), . . . . . | 6,208.65 | |
| 12,273.76 | **Crowninshield** (1877), . . . . . | 12,426.41 | |
| 600.00 | **Warren H. Cudworth** (balance), | 600.00 | |
| 6,109.55 | **Francis H. Cummings** (1898), . | 6,184.55 | |
| 5,595.79 | **George** and **Martha Derby** (1881), | 5,620.55 | |
| 5,282.96 | **Julius Dexter** (1892), . . . . . | 5,269.90 | |
| 2,892.68 | **Orlando W. Doe** (1893), . . . . | 2,934.73 | |
| 5,530.79 | **William Samuel Eliot** (1875), . | 5,552.86 | |
| | Department of Education (balance), . | 250.00 | |
| 41,824.41 | **Joseph Eveleth** (1896), . . . . | 42,277.97 | |
| 2,220.40 | Fall River (1893), . . . . . | 2,249.40 | |
| 6,421.09 | **Farrar** (1873), . . . . . | 6,486.36 | |
| 11,690.66 | **Richard Augustine Gambrill** (1890), . . . . . | 11,814.69 | |
| 7,827.63 | **Charles Haven Goodwin** (1889), | 7,911.99 | |
| $7,969,990.38 | . . Amounts carried forward, . . . | $6,420,507.34 | $1,841,052.43 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $7,969,990.38 | . . Amounts brought forward, . . . | $6,420,507.34 | $1,841,052.43 |
| 4,409.98 | **Greene** (1863), . . . . . | 4,476.51 | |
| 100.00 | **Price Greenleaf** (balance), . . . | 100.00 | |
| 10,444.99 | **John Appleton Haven** (1902), . | 10,477.84 | |
| 24,388.04 | **William Hilton** (1897), . . . . | 24,685.49 | |
| 11,023.73 | **Ebenezer Rockwood Hoar** (1895), . . . . . | 11,140.01 | |
| 6,461.20 | **Levina Hoar,** for the town of Lincoln, Mass. (1876), . . . . . | 6,528.44 | |
| 13,725.46 | **Hodges** (1878), . . . . . | 13,772.12 | |
| 6,432.71 | **Hollis** (1722), . . . . . | 6,498.57 | |
| 11,026.18 | **Henry B. Humphrey** (1890), . . | 11,117.56 | |
| 31,362.34 | **Charles L. Jones** (1901), . . . . | 31,702.21 | |
| 10,666.71 | **George Emerson Lowell** (1886), | 10,770.46 | |
| 5,419.49 | **Markoe** (1903), . . . . . | 5,535.56 | |
| 3,922.40 | **Matthews** (balance), . . . . . | 4,280.71 | |
| 6,323.43 | **Merrick** (1888), . . . . . | 6,408.89 | |
| 8,465.10 | **Morey** (1868), . . . . . | 8,555.73 | |
| 5,939.85 | **Lady Mowlson** (1643), . . . . . | 6,006.51 | |
| | Boston Newsboys' (1906), . . . . . | 2,670.81 | |
| 5,808.65 | **Howard Gardner Nichols** (1897), | 5,868.87 | |
| 6,195.38 | **Lucy Osgood** (1873), . . . . . | 6,184.56 | |
| 5,130.00 | **George Foster Peabody** (1902), | 5,296.20 | |
| 6,854.32 | **Pennoyer** (1670), . . . . . | 7,035.85 | |
| 4,483.00 | **Rebecca A. Perkins** (1869), . . | 4,553.12 | |
| 11,014.50 | Philadelphia (1904), . . . . . | 11,130.29 | |
| 1,632.96 | **Wendell Phillips** Mem'l (1895), | 1,663.14 | |
| | **William Reed** (1907), . . . . . | 4,077.50 | |
| 350.00 | **Ricardo** Prize (balance), . . . . . | 350.00 | |
| 1,279.50 | **Rodger** (1883), . . . . . | 1,342.30 | |
| 3,539.52 | **Henry Bromfield Rogers** (1859), | 3,593.33 | |
| 5,864.03 | **Edward Russell** (1877), . . . . | 5,926.95 | |
| 5,750.92 | **Sales** (1893), . . . . . | 5,883.29 | |
| 11,451.29 | **Saltonstall** (1739), . . . . . | 11,588.53 | |
| 8,734.69 | **Leverett Saltonstall** (1895), . . | 8,838.58 | |
| 7,094.68 | **Mary Saltonstall** (1730), . . . . | 7,143.04 | |
| 3,265.12 | **Sever** (1868), . . . . . | 3,275.43 | |
| 11,388.06 | **Sewall** (1696), . . . . . | 11,467.21 | |
| 49,847.67 | **Shattuck** (1854), . . . . . | 50,255.21 | |
| 6,200.20 | **Slade** (1877), . . . . . | 6,214.62 | |
| 4,723.44 | **Dunlap Smith** (1903), . . . . . | 4,704.57 | |
| 4,599.92 | **Story** (1864), . . . . . | 4,650.78 | |
| 3,218.54 | **Stoughton** (1701), . . . . . | 3,313.01 | |
| 3,884.58 | **Swift** (1899), . . . . . | 4,075.33 | |
| 80,578.53 | **Thayer** (1857), . . . . . | 81,294.96 | |
| 4,369.88 | **Gorham Thomas** (1865), . . . . | 4,434.45 | |
| 7,852.95 | **Toppan** (1868), . . . . . | 7,938.53 | |
| 26,100.25 | **Townsend** (1861), . . . . . | 26,381.76 | |
| $8,421,314.57 | . . Amounts carried forward, . . . | $6,883,666.17 | $1,841,052.43 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $8,421,314.57 | . . Amounts brought forward, . . . | $6,883,666.17 | $1,841,052.43 |
| 5,130.60 | **Walcott** (1855), . . . . . | 5,182.53 | |
| 10,847.16 | **Christopher M. Weld** (1899), . | 10,979.75 | |
| 5,399.55 | **Jacob Wendell** (1899), . . . . . | 5,469.60 | |
| 11,938.89 | **Whiting** (1874), . . . . . | 12,105.10 | |
| 5,085.18 | **Josiah Dwight Whitney** (1904), | 5,094.85 | |
| 9,757.14 | **Mary L. Whitney** (1903), . . . | 10,033.71 | |
| | **Willard** (1907), . . . . . | 10,061.38 | |
| 10,202.83 | **Charles Wyman** (1905), . . . . | 10,303.80 | |
| 100.00 | Anonymous Gift for Scholarship use, | 100.00 | |
| | BENEFICIARY AND LOAN FUNDS. | | |
| 52,176.32 | **Rebecca C. Ames** (1903), . . . | 53,070.16 | |
| 652.50 | **Nathaniel Appleton** (1772), . . | 663.53 | |
| 1,993.46 | **Frank Bolles** Memorial (1894), . | 2,066.32 | |
| 1,578.42 | **William Brattle** (1717), . . . . | 1,655.90 | |
| 62,801.70 | **Daniel A. Buckley** (1905), . . . | 70,559.26 | |
| 50,921.47 | **Walter Channing Cabot** (1905), | 51,007.68 | |
| 1,078.31 | **Thomas Danforth** (1724), . . . | 1,131.24 | |
| 5,448.73 | **Moses Day** (1880), . . . . . | 5,455.27 | |
| 451.73 | **John Ellery** (1738), . . . . . | 473.92 | |
| 1,333.34 | Exhibitions (1796), . . . . . | 1,334.94 | |
| 821.09 | **Thomas Fitch** (1737), . . . . . | 861.40 | |
| 486.98 | **Ephraim Flynt** (1723), . . . . | 510 89 | |
| 169.32 | **Henry Flynt** (1760), . . . . . | 177.62 | |
| 506.28 | **Henry Gibbs** (1722), . . . . . | 531.12 | |
| 3,353.67 | **John Glover** (1653), . . . . . | 3,518.35 | |
| 13,943.80 | **Price Greenleaf** Aid (balance), . | 17,068.79 | |
| 1,701.58 | **Edwin A. W. Harlow** (1905), . | 11,177.93 | |
| 377.52 | **Edward Holyoke** (1748), . . . | 396.08 | |
| 2,441.40 | **Robert Keayne** (1659), . . . . | 2,561.25 | |
| 26,185.00 | **Bertram Kimball** (1903), . . . | 26,227.50 | |
| 1,056.92 | **Mary Lindall** (1812), . . . . . | 1,108.82 | |
| 5,988.87 | **Susan B. Lyman** (1899), . . . . | 5,988.87 | |
| 345.02 | **Susan B. Lyman** Loans (College) (balance), . . . . . | 541.06 | |
| 237.17 | **Anne Mills** (1725), . . . . . | 248.81 | |
| 10,906.81 | **Munroe** (1880), . . . . . | 10,919.89 | |
| 2,076.46 | **Palfrey** Exhibition (1821), . . . . | 2,098.39 | |
| 4,979.51 | **Dr. Andrew P. Peabody** Memorial (1896), . . . . . | 5,095.03 | |
| 1,192.24 | Scholarship and Beneficiary Money Returned (balance), . . . . . | 1,288.69 | |
| 225.89 | **Joseph Sewall** (1765), . . . . . | 236.99 | |
| 15,231.19 | **Alexander Wheelock Thayer** (1899), . . . . . | 15,499.03 | |
| 11,155.10 | **Quincy Tufts** (1877), . . . . . | 11,168.49 | |
| 304.98 | **Benjamin Wadsworth** (1737), . | 319.96 | |
| $8,761,878.70 | . . Amounts carried forward, . . . | $7,257,960.07 | $1,841,052.43 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $8,761,878.70 | . . Amounts brought forward, . . . | $7,257,960.07 | $1,841,052.43 |
| | PRIZE FUNDS. | | |
| 250.00 | Anonymous Gift for a prize essay in the Department of History and Government (balance), . . . . . | | |
| 1,675.16 | **James Gordon Bennett** (1893), . | 1,757.40 | |
| 421.52 | **Philo Sherman Bennett** (1905), | 402.24 | |
| 10,720.04 | **Francis Boott** (1904), . . . . . | 11,038.72 | |
| 31,414.67 | **Bowdoin** Prizes for Dissertations (1791), | 31,882.15 | |
| 3,232.88 | **Boylston** Prizes for Elocution (1817), | 3,136.62 | |
| 5,401.86 | **Coolidge** Debating (1899), . . . . | 5,467.10 | |
| 50.00 | **Dante** (balance), . . . . . | ..... | |
| 2,700.00 | **Lloyd McKim Garrison** Prize and Medal (1904), . . . . . | 2,714.80 | |
| 1,963.36 | **Edward Hopkins** Gift for "Deturs" (1718) (balance), . . . . . | 1,977.21 | |
| 1,093.57 | **Sales** (1892), . . . . . | 1,147.29 | |
| 2,620.80 | **John O. Sargent** (1889), . . . . | 2,649.49 | |
| 7,000.00 | **George B. Sohier** (1890), . . . . | 7,000.00 | |
| 3,792.02 | **Charles Sumner** (1874), . . . . | 3,978.21 | |
| 3,944.03 | **Robert N. Toppan** (1894), . . . | 3,987.68 | |
| 2,231.84 | **Philip Washburn** (1899), . . . | 2,266.43 | |
| 114,439.97 | **David A. Wells** (1901), . . . . | 114,550.10 | 7,451,915.51 |
| | LIBRARY FUNDS. | | |
| 2,151.54 | **Bowditch** (1861), . . . . . | $2,181.25 | |
| 223.39 | **Bright** (balance), . . . . . | 102.95 | |
| | **William R. Castle** (1907), . . . | 1,000.00 | |
| 704.83 | Fund of the **Class of 1851** (1899), | 739.45 | |
| 694.08 | " " " **1851** (C. F. **Dunbar's** Gift) (1899), . . . . | 728.16 | |
| 3,500.00 | Book Fund of the **Class of 1881** (1906), . . . . . | 3,582.24 | |
| 27,700.00 | **Edwin Conant** (1892), . . . . . | 27,763.33 | |
| 25,902.61 | **Constantius** (1886), . . . . . | 25,916.69 | |
| 5,369.64 | **Denny** (1875), . . . . . | 5,380.42 | |
| 5,395.93 | **Farrar** (1871), . . . . . | 5,418.42 | |
| 3,246.38 | **Haven** (1844), . . . . . | 3,285.11 | |
| 10,157.70 | **Hayes** (1885), . . . . . | 10,078.03 | |
| 5,296.86 | **Hayward** (1864), . . . . . | 5,397.19 | |
| | **R. M. Hodges** (balance), . . . . | 129.68 | |
| 2,434.02 | **Hollis** (1781), . . . . . | 2,459.72 | |
| 2,127.90 | **Homer** (1871), . . . . . | 2,161.41 | |
| 526.70 | **Jarvis** (1885), . . . . . | 514.75 | |
| 5,430.88 | **Lane** (1863), . . . . . | 5,335.06 | |
| 27,272.93 | **Lowell** (1881), . . . . . | 27,690.52 | |
| 60,296.68 | **Minot** (1870), . . . . . | 60,574.27 | |
| $9,143,262.49 | . . Amounts carried forward, . . . | $190,438.65 | $9,292,967.94 |

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|---|---|---|---|
| $9,143,262.49 | . . Amounts brought forward, . . . | $190,438.65 | $9,292,967.94 |
| 8,687.53 | **Charles Eliot Norton** (1905), . | 8,954.62 | |
| 7,238.61 | **Lucy Osgood** (1873), . . . . . | 7,219.94 | |
| 7,026.98 | **Mary Osgood** (1860), . . . . . | 7,119.63 | |
| 139.75 | **Price Greenleaf** Income for Books (balance), . . . . . | ..... | |
| 3,918.60 | **Sales** (1892), . . . . . | 3,916.67 | |
| 5,280.91 | **Salisbury** (1858), . . . . . | 5,152.20 | |
| | **Stephen Salisbury** (1907), . . . | 5,120.00 | |
| 20,000.00 | **Sever** (1878), . . . . . | 20,000.00 | |
| 4,011.78 | **Shapleigh** (1801), . . . . . | 3,998.32 | |
| 160.69 | **George B. Sohier** Income for Books (balance), . . . . . | 80.17 | |
| 10,610.11 | Subscription for Library (1859), . . | 10,545.71 | |
| 37,532.94 | **Sumner** (1875), . . . . . | 37,514.04 | |
| 5,063.22 | **Kenneth Matheson Taylor** (1899), | 5,168.00 | |
| 12,242.04 | **Daniel Treadwell** (1885), . . . | 12,123.10 | |
| 5,018.28 | **Ichabod Tucker** (1875), . . . . | 5,007.22 | |
| 645.58 | **Wales** Income for Books (balance), | 801.81 | |
| 15,966.02 | **Walker** (1875), . . . . . | 15,993.00 | |
| 5,260.87 | **Ward** (1858), . . . . . | 5,306.02 | |
| 20,513.58 | **J. Huntington Wolcott** (1891), | 20,226.65 | |
| 100,000.00 | **Eben Wright** (1883), . . . . . | 100,000.00 | |
| 3,711.02 | Sundry Gifts for books (balances), . | 3,219.79 | |
| | Sundry Gifts for service (balances), . | 813.45 | |
| 1,005.92 | Sundry balances, . . . . . | 1,060.44 | 469,779.48 |
| | DIVINITY SCHOOL FUNDS. | | |
| 6,364.00 | Divinity School (balance), . . . . . | $6,261.20 | |
| 71,427.02 | New Endowment (1879), . . . . . | 71,427.02 | |
| 17,000.00 | **Oliver Ames** (1880), . . . . . | 17,000.00 | |
| 525.00 | **Hannah C. Andrews** (1836), . . | 525.00 | |
| 1,115.26 | **Daniel Austin** (1880), . . . . . | 1,115.26 | |
| 1,000.00 | **Adams Ayer** (1869), . . . . . | 1,000.00 | |
| 15,275.00 | **Joseph Baker** (1876), . . . . . | 15,275.00 | |
| 200.40 | Beneficiary money returned (balance), | 210.22 | |
| 4,573.54 | **Rushton Dashwood Burr** (1894), | 4,540.15 | |
| 37,583.74 | **Bussey** Professorship (1862), . . | 37,583.74 | |
| 2,177.95 | **Joshua Clapp** (1836), . . . . . | 2,177.95 | |
| 5,000.00 | **Edwin Conant** (1892), . . . . . | 5,000.00 | |
| 25,544.37 | **Dexter** Lectureship (1810), . . . | 25,544.37 | |
| 54,203.14 | **Frothingham** Professorship (1892), | 54,703.14 | |
| 1,050.00 | **Abraham W. Fuller** (1847), . . | 1,050.00 | |
| 911.34 | **Lewis Gould** (1852), . . . . . | 911.34 | |
| 857.86 | **Louisa J. Hall** (1893), . . . . . | 899.99 | |
| 6,008.43 | **Hancock** Professorship (1765), . | 6,008.43 | |
| 77,600.81 | **Charles L. Hancock** (1891), . . | 77,600.81 | |
| 5,000.00 | **Haven** (1898), . . . . . | 5,000.00 | |
| $9,750,714.78 | . . Amounts carried forward, . . . | $338,833.62 | $9,762,747.37 |

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|---|---|---|---|
| $9,750,714.78 | . . Amounts brought forward, . . . | $333,833.62 | $9,762,747.37 |
| 1,050.00 | **Samuel Hoar** (1857), . . . . . | 1,050.00 | |
| 10,000.00 | **Henry P. Kidder** (1881), . . . | 10,000.00 | |
| 9,184.69 | **Henry Lienow** (1841), . . . . . | 9,184.69 | |
| 1,050.00 | **Caroline Merriam** (1867), . . . | 1,050.00 | |
| 16,015.81 | **Parkman** Professorship (1814), . | 16,015.81 | |
| 582.11 | **John W. Quinby** (1888), . . . . | 610.69 | |
| 1,000.00 | **Abby Crocker Richmond** (1881), | 1,000.00 | |
| 1,000.00 | **John L. Russell** (1890), . . . . | 1,000.00 | |
| 10,000.00 | **William B. Spooner** (1890), . . | 10,000.00 | |
| 40,000.00 | **Thomas Tileston** of New York Endowment (1879), . . . . . | 40,000.00 | |
| 5,250.00 | **Mary P. Townsend** (1861), . . | 5,250.00 | |
| 2,100.00 | **Winthrop Ward** (1862), . . . . | 2,100.00 | |
| 56,345.73 | **Winn** Professorship (1877), . . . | 56,845.73 | |
| | SCHOLARSHIP AND BENEFICIARY FUNDS. | | |
| 2,553.47 | **Robert Charles Billings** Prize (1904), . . . . . | 2,578.82 | |
| 13,360.64 | **Abner W. Buttrick** (1880), . . . | 13,441.67 | |
| 5,727.52 | **Thomas Cary** (1820), . . . . . | 5,768.76 | |
| 2,827.15 | **George Chapman** (1834), . . . | 2,865.96 | |
| 4,564.86 | **Joshua Clapp** (1839), . . . . . | 4,609.00 | |
| 15,149.89 | **Jackson** Foundation (1835), . . . | 15,253.76 | |
| 5,588.52 | **J. Henry Kendall** (1863), . . . | 5,662.94 | |
| 3,534.03 | **Nancy Kendall** (1846), . . . . | 3,567.55 | |
| 1,050.00 | **William Pomroy** (1835), . . . . | 1,050.00 | 542,739.00 |
| | LAW SCHOOL FUNDS. | | |
| 347,742.95 | Law School (balance), . . . . . | $132,456.87 | |
| 547.32 | **James Barr Ames** Loan (1904), | 574.18 | |
| 4,116.57 | **James Barr Ames** Prize (1898), | 3,810.51 | |
| 78,201.86 | **Bemis** Professorship (1879), . . . | 82,041.58 | |
| 2,021.81 | Gift of **James Munson Barnard** and **Augusta Barnard** (balance), | 2,047.68 | |
| 23,979.82 | **Bussey** Professorship (1862), . . | 23,979.82 | |
| 102,764.98 | **James C. Carter** Professorship (1906), . . . . . | 107,810.74 | |
| 12,047.40 | **James Coolidge Carter** Loan (1906), . . . . . | 12,638.91 | |
| 15,750.00 | **Dane** Professorship (1829), . . . . | 15,750.00 | |
| | **Samuel Phillips Prescott Fay,** 1798, Fund and Scholarship (1907), | 5,081.85 | |
| 3,564.84 | **George Fisher** Scholarship (1906), | 3,739.88 | |
| 756.12 | **Hughes** Loan (1903), . . . . . | 476.84 | |
| 47,021.25 | Law School Book (1882), . . . . . | 47,021.25 | |
| 100,000.00 | Law School Library (1898), . . . . | 100,000.00 | |
| 8,340.81 | **Royall** Professorship (1781), . . . | 8,340.81 | |
| 496.20 | Scholarship money returned (balance), | 739.55 | |
| 94,994.97 | **Weld** Professorship (1882), . . . | 94,994.97 | 641,505.44 |
| $10,800,996.10 | . . Amounts carried forward, . . . . . | | $10,946,991.81 |

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| $10,800,996.10 | . . Amounts brought forward, . . . . . | | $10,946,991.81 |
| | LAWRENCE SCIENTIFIC SCHOOL FUNDS. | | |
| 374.28 | **Edward Austin** Loans repaid (bal.), | $1,080.53 | |
| 30,686.85 | **John B. Barringer** (1873), . . . | 30,686.85 | |
| 27,324.83 | **George H. Emerson** Scholarship (1903), . . . . . | 27,836.09 | |
| 5,794.12 | **George A. Gardner** (1892), . . | 5,816.87 | |
| 11,045.24 | **Hennen Jennings** Scholarship(1898), | 11,162.55 | |
| 61,536.43 | **Abbott Lawrence** (1859), . . . | 61,536.43 | |
| 50,375.00 | **James Lawrence** (1865), . . . . | 50,375.00 | |
| | Lawrence Scientific School Association Scholarship (balance), . . . | 150.00 | |
| 188.00 | **Lawrence** Scientific School Loans repaid (balance), . . . . . | 833.26 | |
| 197.50 | **Susan B. Lyman** Loan (L. S. S.) (balance), . . . . . | 295.52 | |
| 40,805.73 | Professorship of Engineering (1847), | 40,805.73 | |
| 25,000.00 | **Arthur Rotch** (1895), . . . . . | 25,000.00 | |
| | **Shaler** Memorial (1907), . . . . . | 32,288.64 | |
| 6,156.28 | **Stuart Wadsworth Wheeler**(1898), | 6,371.54 | 294,239.01 |
| | GRADUATE SCHOOL OF APPLIED SCIENCE FUNDS. | | |
| 250.00 | **Warren Delano Jr.** Loan Scholarship. Gift (balance), . . . . . | $250.00 | |
| 250.00 | **E. D. Peters** Scholarship. Gift (bal.), | 250.00 | 500.00 |
| | MUSEUM OF COMPARATIVE ZOÖLOGY FUNDS. | | |
| 35,714.52 | Museum of Comparative Zoölogy (bal.), | $32,074.13 | |
| 297,933.10 | **Agassiz** Memorial (1875), . . . . | 297,933.10 | |
| 7,594.01 | Teachers' and Pupils' (1875), . . . | 7,594.01 | |
| 5,567.89 | **Virginia Barret Gibbs** Scholarship (1892), . . . . . | 5,841.28 | |
| 50,000.00 | **Gray** Fund for Zoölogical Museum (1859), . . . . . | 50,000.00 | |
| 107,934.77 | **Sturgis Hooper** (1865), . . . . | 108,087.41 | |
| 7,740.66 | **Humboldt** (1869), . . . . . | 7,740.66 | |
| 5,000.00 | **Willard Peele Hunnewell** (1901), | 5,000.00 | |
| 117,469.34 | Permanent (1859), . . . . . | 117,469.34 | 631,739.93 |
| | GERMANIC MUSEUM FUNDS. | | |
| 19,315.00 | **Emperor William** (1906), . . . | $26,285.00 | |
| 505.15 | Unrestricted Gift (balance), . . . | 408.97 | 26,693.97 |
| $11,715,754.80 | . . Amounts carried forward. . . . . | | $11,900,164.72 |

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| $11,715,754.80 | . . Amounts brought forward, . . . . . | $11,900,164.72 | |
| | PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY FUNDS. | | |
| 12,508.70 | **Hemenway** Fellowship (1891), . | $12,922.89 | |
| 28,355.56 | **Peabody** Building (1866), . . . | 28,355.56 | |
| 47,335.10 | **Peabody** Collection (1866), . . . | 47,335.10 | |
| 47,546.64 | **Peabody** Professor (1866), . . . | 47,594.43 | |
| 30,171.24 | **Thaw** Fellowship (1890), . . . . | 30,179.43 | |
| 10,413.09 | **Henry C. Warren** Exploration (1899), . . . . . | 10,418.37 | |
| 5,000.00 | **Susan Cornelia Warren** (1902), | 5,000.00 | |
| 5,801.57 | **Robert C. Winthrop** Scholarship (1895), . . . . . | 5,861.45 | |
| 20,725.63 | **Huntington Frothingham Wolcott** (1891), . . . . . | 20,912.21 | |
| 416.66 | Anonymous Gift for South American Expedition (balance), . . . . . | 108.71 | 208,688.15 |
| | MEDICAL SCHOOL FUNDS. | | |
| | **Harvard** Medical Alumni (1907), | $2,509.54 | |
| 10,059.25 | Anonymous Fund in the Department of Theory and Practice (1906), . | 10,153.15 | |
| 11,573.60 | **Edward Austin** (Bacteriological Laboratory) (1899), . . . . . | 11,474.00 | |
| 25,512.68 | **Edward M. Barringer** (1881), | 25,512.68 | |
| 119,515.13 | **Robert C. Billings** (1900), . . | 100,000.00 | |
| 6,242.36 | **J. Ingersoll Bowditch** (1889), | 6,433.95 | |
| 1,477.86 | **Boylston** Fund for Medical Books (1800), . . . . . | 1,532.97 | |
| 22,437.89 | **John B. & Buckminster Brown** Endowment (1896), . . . . . | 23,039.60 | |
| 50,888.75 | **Bullard** Professorship of Neuropathology (1906), . . . . . | 50,651.80 | |
| 94,033.35 | **Caroline Brewer Croft** (1899), | 94,023.59 | |
| 383,573.64 | **Calvin** and **Lucy Ellis** (1899), | 384,448.40 | |
| 205,824.11 | **George Fabyan** Foundation for Comparative Pathology (1906), . | 207,382.29 | |
| 1,836.08 | **Samuel E. Fitz** (1884), . . . . | 1,836.08 | |
| 3,743.23 | **F. B. Greenough** (Surgical Research) (1901), . . . . . | 4,444.39 | |
| 102,777.16 | **George Higginson** Professorship (1902), . . . . . | 103,823.51 | |
| | **John Homans** Memorial (1906), | 51,554.01 | |
| 69,192.65 | **Jackson** Professorship of Clinical Medicine (1859), . . . . . | 69,192.65 | |
| 96,127.75 | **Henry Jackson** Endowment, . . | 98,347.63 | |
| $13,128,844.48 | . . Amounts carried forward, . . | $1,246,360.24 | $12,108,852.87 |

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| $13,128,844.48 | . . Amounts brought forward, . . | $1,246,360.24 | $12,108,852.87 |
| | **Walter Augustus Lecompte** Professorship of Otology (1907), | 50,181.87 | |
| 2,026.12 | Medical Library (1872), . . . . . | 2,125.60 | |
| 53,041.05 | **William O. Moseley** (1897), . . | 53,145.36 | |
| 38,750.00 | New Subscription (1888), . . . . . | 38,750.00 | |
| | **Lyman Nichols** (1907), . . . . | 10,020.18 | |
| 426,894.05 | **Henry L. Pierce** (Residuary) (1898), | 71,947.44 | |
| 56,244.54 | **Proctor** (1903), . . . . . | 56,027.97 | |
| 1,177,358.92 | **John D. Rockefeller** Gift (1902), | 1,000,000.00 | |
| 5,573.63 | Gift for Pathological Laboratory, . | 5,783.96 | |
| 9,335.94 | **Dr. Ruppaner** (1897), . . . . . | 9,335.94 | |
| | **Henry Francis Sears** Fund for Pathology (1907), . . . . . | 35,000.00 | |
| 77,000.00 | **George C. Shattuck** (1853), . . | 77,000.00 | |
| | **James Skillen** Memorial Fund (1907), . . . . . | 10,857.39 | |
| 115,298.91 | **James Stillman** Professorship (1902), . . . . . | 115,960.09 | |
| 5,341.58 | School of Comparative Medicine (1899), . . . . . | 5,603.87 | |
| 6,889.18 | Surgical Laboratory (1897), . . . . | 6,796.40 | |
| 15,765.11 | **Mary W. Swett** (1884), . . . . | 15,765.11 | |
| 20,000.00 | **Samuel W. Swett** (1884), . . . | 20,000.00 | |
| 2,000.00 | **Quincy Tufts** (1879), . . . . . | 2,000.00 | |
| 13,651.12 | **Warren** Fund for Anatomical Museum (1848), . . . . . | 12,391.55 | |
| | **Edward Wigglesworth** Professorship of Dermatology (1907), | 50,829.78 | |
| 41,896.00 | **Charles Wilder** (1900), . . . . | 41,964.00 | |
| 39,154.85 | **Henry Willard Williams** (1893), | 41,077.36 | |
| 1,005.12 | Medical School Real Estate (special balance), . . . . . | ..... | |
| 683.53 | Gifts for Anatomical Research (bal.), | 491.66 | |
| 1,835.23 | Gifts for Biological Chemistry (bal), | 3,921.93 | |
| 200.19 | Gift for Pathological Dep't. (bal.), | 4,333.82 | |
| 3,073.80 | Sundry Gifts (balances), . . . . . | 1,486.75 | |
| | FELLOWSHIP FUNDS. | | |
| | Anonymous Gift for Teaching Fellowships in Histology and Embryology (balance), . . . . . | 8.32 | |
| 5,446.22 | **Geo. Cheyne Shattuck** Memorial (1891), . . . . . | 5,488.62 | |
| 5,812.72 | **Charles Eliot Ware** Memorial (1891), . . . . . | 5,873.14 | |
| 5,396.80 | **John Ware** Memorial (1891), . . | 5,436.79 | |
| $15,258,519.09 | . . Amounts carried forward, . . | $3,005,965.14 | $12,108,852.87 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $15,258,519.09 | . . Amounts brought forward, . . | $3,005,965.14 | $12,108,852.87 |
| | SCHOLARSHIP FUNDS. | | |
| 5,176.53 | Anonymous Aid (1905), . . . . . | 5,230.72 | |
| 5,250.95 | **Lucius F. Billings** (1900), . . | 5,308.77 | |
| | **James Jackson Cabot** (1906), | 6,245.50 | |
| 5,840.66 | **David Williams Cheever** (1889), | 5,877.45 | |
| 3,216.66 | **Cotting** Gift (1900), . . . . . | 3,249.62 | |
| 2,935.00 | **Orlando W. Doe** (1893), . . . | 2,939.11 | |
| 151.58 | **John Foster** income for Medical Students (balance), . . . . . | 51.58 | |
| 5,712.15 | **Lewis** and **Harriet Hayden** (1894), | 5,720.11 | |
| 6,548.66 | **Claudius M. Jones** (1893), . . | 6,620.22 | |
| 5,513.87 | **Alfred Hosmer Linder** (1895), | 5,584.61 | |
| 8,768.34 | **Joseph Pearson Oliver** (1904), | 8,873.85 | |
| 5,761.73 | **Charles B. Porter** (1897), . . . | 5,819.64 | |
| 5,019.45 | **Charles Pratt Strong** (1894), . | 5,165.88 | |
| 6,579.85 | **Isaac Sweetser** (1892), . . . . | 6,652.93 | |
| 5,415.66 | **John Thomson Taylor** (1899), | 5,481.59 | |
| 5,535.78 | **Edward Wigglesworth** (1897), | 5,607.60 | |
| | PRIZE FUNDS. | | |
| 3,964.29 | **Boylston** (1803), . . . . . | 4,146.42 | |
| 7,843.30 | **William H. Thorndike** (1895), | 8,228.39 | 3,102,769.13 |
| | DENTAL SCHOOL FUNDS. | | |
| 12,958.11 | Dental School (balance), . . . . . | $14,195.67 | |
| 2,265.85 | Dental School Endowment (1880), . | 2,265.85 | |
| 23,000.00 | **Henry C. Warren** Endowment (1889), | 23,000.00 | |
| 13,622.98 | Gifts for Building (1892), . . . . | 17,386.79 | |
| 1,622.42 | **Harvard** Dental Alumni (1906), . | 3,150.53 | |
| 404.55 | Dental School Real Estate (balance), | 563.31 | 60,562.15 |
| | OBSERVATORY FUNDS. | | |
| 50,370.00 | Advancement of Astron. Science (1901), | $50,455.00 | |
| 18,815.01 | Advancement of Astron. Science (1902), | 17,829.40 | |
| 5,000.00 | **Thomas G. Appleton** (1884), . | 5,000.00 | |
| 2,500.00 | **J. Ingersoll Bowditch** (1889), . | 2,500.00 | |
| 200,000.00 | **Uriah A. Boyden** (1887), . . . | 200,000.00 | |
| 2,272.51 | **Draper Memorial** (balance), . . | 1,556.67 | |
| 2,000.00 | **Charlotte Harris** (1877), . . . | 2,000.00 | |
| 45,000.00 | **Haven** (1898), . . . . . | 45,000.00 | |
| 21,000.00 | **James Hayward** (1866), . . . | 21,000.00 | |
| 50,000.00 | Observatory Endowment (1882), . | 50,000.00 | |
| 50,000.00 | **Paine** Professorship (1886), . . . | 50,000.00 | |
| 273,932.07 | **Robert Treat Paine** (1886), . . | 273,932.07 | |
| 110,293.88 | **Edward B. Phillips** (1849), . . | 110,293.88 | |
| 14,794.67 | **Josiah Quincy** (1866), . . . . . | 15,521.10 | |
| 40,138.28 | **David Sears** (1845), . . . . . | 41,123.67 | |
| 13,380.00 | **Augustus Story** (1871), . . . . | 13,380.00 | |
| 42.35 | Gift for publishing lunar photographs, | 42.35 | |
| | Bond Gifts (balance), . . . . . | 2,086.96 | 901,721.10 |
| $16,301,166.23 | . . Amounts carried forward, . . . . . | | $16,173,905.25 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $16,301,166.23 | Amounts brought forward, | | $16,173,905.25 |
| | **BUSSEY INSTITUTION FUNDS.** | | |
| 28,826.48 | **Bussey** Institution (balance), | $30,731.07 | |
| 18,115.23 | Woodland Hill (1895), | 17,783.21 | 48,514.28 |
| | **ARNOLD ARBORETUM FUNDS.** | | |
| 125,815.00 | **Arnold** Arboretum (1899), | $126,560.00 | |
| 160,867.14 | **James Arnold** (1872), | 161,262.07 | |
| 29,385.15 | Arboretum Construction Gifts (balance), | 25,000.05 | |
| 12,500.00 | **Robert Charles Billings** (1904), | 12,500.00 | |
| 22,992.49 | **William L. Bradley** (1897), | 22,984.58 | |
| 2,308.06 | **Bussey** Fund for the **Arnold** Arboretum (1903), | 2,308.06 | |
| 20,000.00 | **Francis Skinner** (1906), | 20,000.00 | |
| 24.85 | Gift for books (balance), | 2,482.56 | |
| | Gift for Expedition to China (balance), | 11,066.79 | 384,164.11 |
| | **OTHER FUNDS FOR SPECIAL PURPOSES.** | | |
| | PHILLIPS BROOKS HOUSE. | | |
| 10,506.66 | **Phillips Brooks** House Endowment (1901), | $10,506.66 | |
| 11,343.64 | **Ralph H. Shepard** (1900), | 11,343.64 | |
| 6,888.76 | **Ralph Hamilton Shepard** Memorial (1898), | 6,437.36 | |
| 5,776.73 | **John W. and Belinda L. Randall** (1897), | 5,960.38 | |
| | WILLIAM HAYES FOGG ART MUSEUM. | | |
| | **Fogg** Art Museum (balance), | 105.87 | |
| 50,000.00 | **William Hayes Fogg** (1892), | 50,000.00 | |
| 16,573.77 | **Gray** Fund for Engravings (1858), | 16,634.51 | |
| 17,831.69 | **William M. Prichard** (1898), | 18,358.41 | |
| 34,620.77 | **John Witt Randall** (1892), | 35,181.18 | |
| | STILLMAN INFIRMARY. | | |
| 1,096.74 | **Stillman** Infirmary (balance), | 1,458.04 | |
| 6,430.44 | **Stillman** Infirmary Gift (balance), | 6,746.15 | |
| 54,946.60 | **Robert Charles Billings,** for **Stillman** Infirmary (1903), | 57,644.50 | |
| 5,855.84 | Free Bed Fund of the **Class of 1868** (1898), | 6,143.37 | |
| 592.73 | Free Bed Fund for **Stillman** Infirmary (1900), | 621.85 | |
| 3,296.82 | **Herbert Schurz** Memorial Free Bed (1903), | 3,458.70 | |
| 2,907.40 | **Henry P. Walcott** (1901), | 3,050.13 | |
| $16,950,669.22 | Amounts carried forward, | $233,650.75 | $16,606,583.64 |

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| Principal, Aug. 1, 1906. | | Principal, July 31, 1907. | |
|---|---|---|---|
| $16,950,669.22 | . . Amounts brought forward, . . . | $233,650.75 | $16,606,583.64 |
| | CLASS FUNDS. | | |
| 1,482.23 | Fund of the **Class of 1834** (1887), | 1,545.90 | |
| 8,661.67 | " " " **1844** (1896), | 9,027.83 | |
| 11,387.10 | " " " **1846** (1905), | 11,946.20 | |
| 3,725.00 | " " " **1853** (1887), | 3,725.00 | |
| 7,855.50 | " " " **1856** (1904), | 7,885.68 | |
| | CONSTRUCTION GIFTS. | | |
| 421.74 | Brighton Marsh Fence (balance), . . | 421.74 | |
| 442.43 | Semitic Building, " . . | 442.43 | |
| 159.47 | **John Simpkins** Hall, " . . | 159.47 | |
| 294,093.50 | **George Smith** Bequest (1904), . | 310,151.24 | |
| 32,790.06 | Gift for new University Library Building (balance), . . . . . | 34,400.05 | |
| | SUNDRY FUNDS. | | |
| 481,015.07 | **Edward Austin** (1899), . . . . | 482,783.15 | |
| 50,000.00 | **Bright** Legacy (1880), . . . . . | 50,000.00 | |
| 15,038.08 | Bursar's Sundry Accounts (balance), | 8,915.69 | |
| 392,710.18 | **Bussey** Trust (1861), . . . . . | 392,710.18 | |
| 164,487.94 | **Calvin** and **Lucy Ellis** Aid (1899), | 164,840.92 | |
| 3,171.50 | **John Foster** (1840), . . . . . | 3,171.50 | |
| 598,969.63 | Gains and Losses for General Investments (1891), . . . . . | 601,356.70 | |
| 794,942.67 | **Price Greenleaf** (1887), . . . . | 794,942.67 | |
| 29,939.33 | **Henry Harris** (1883), . . . . . | 29,939.33 | |
| 1,452.77 | **Harvard** Memorial Society (1898), | 1,524.11 | |
| 55,762.48 | **Robert Troup Paine** (1880), . . | 57,430.10 | |
| 42,000.00 | **James Savage** (1873), . . . . . | 42,000.00 | |
| 11,553.10 | Gifts for Semitic Museum Collection (balance), . . . . . | 16,572.71 | |
| 3,584.73 | Gifts for Excavations in Palestine (balance), . . . . . | 1,050.36 | |
| | Gifts for Chinese Students (balance), | 7.00 | |
| 137.96 | Gifts for Cuban Teachers (balance), | 85.96 | |
| | Sundry balances, . . . . . | 3,895.81 | 3,264,582.48 |
| | FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE. | | |
| 16,665.80 | **Daniel Williams** (1716), . . . . | $16,683.67 | |
| 4,792.55 | **Sarah Winslow** (1790), . . . . | 4,800.13 | 21,483.80 |
| $19,977,911.71 | | | $19,892,649.92 |

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## RECEIPTS AND PAYMENTS FOR DEPARTMENTS.

The following tables are intended to show in detail the resources and expenditures of each Department of the University. The receipts include every gift and the income of every Fund. The payments include every payment for the specific object of every gift and Fund. The items are stated separately except in the case of payments for a general object such as salaries, in which case the payments are merged under the general heading. These tables are not found in the Treasurer's books, but are a transcript from the books and form a balanced statement, as shown on page 136.

If the income of a restricted Fund in any year is not wholly used, the surplus is added to the principal and the addition is temporary or permanent according to the terms of the restriction. Thus there may be a surplus in the restricted income of a Department and yet a deficit in its general account. (The general accounts are shown on pages 8 to 16.) If payments on account of a restricted Fund in any year exceed the income available, the excess is treated as a loan or "advance" from General Investments, which must be repaid from the future income of the Fund. If a gift for immediate use is not wholly spent before the end of the year, the balance is included in the statement of "Funds and Balances" beginning on page 62.

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## Table No. I.

## THE UNIVERSITY.

### RECEIPTS.

| | | |
|---|---|---|
| Gifts for capital account. | | |
| **R. H. Eddy** Fund (additional), . . . . . | $1.00 | |
| **Edward Erwin Coolidge** Fund, . . . . . | 9,000.00 | $9,001.00 |
| Income of the following Funds: — | | |
| Band Music, . . . . . | $56.12 | |
| **William H. Baldwin, Jr.** . . . . . | 98.20 | |
| **Andrew Bigelow,** . . . . . | 243.04 | |
| **Stanton Blake,** . . . . . | 245.50 | |
| **Charlotte F. Blanchard,** . . . . . | 234.26 | |
| **Samuel D. Bradford,** . . . . . | 257.78 | |
| **James C. Carter,** . . . . . | 4,910.00 | |
| **John W. Carter,** . . . . . | 369.09 | |
| **Edward Erwin Coolidge** (part, see p. 88), . | 200.00 | |
| **Thomas Cotton,** . . . . . | 7.61 | |
| **John Cowdin,** . . . . . | 1,661.30 | |
| **George B. Dorr,** . . . . . | 3,424.21 | |
| **George Draper,** . . . . . | 1,430.86 | |
| **R. H. Eddy,** . . . . . | 1,676.78 | |
| **Harvard Ellis,** . . . . . | 4,970.15 | |
| **Richard W. Foster,** . . . . . | 1,227.50 | |
| **John Davis Williams French,** . . . . . | 157.15 | |
| **Gore,** . . . . . | 1,010.04 | |
| **John C. Gray,** . . . . . | 738.19 | |
| **Henry Harris** (½ income, see p. 111), . . . . . | 735.00 | |
| **Walter Hastings,** . . . . . | 728.48 | |
| **Henry L. Higginson,** . . . . . | 982.00 | |
| **George Baxter Hyde,** . . . . . | 245.50 | |
| **Leonard Jarvis,** . . . . . | 828.42 | |
| **Henry P. Kidder,** . . . . . | 491.00 | |
| **Joseph Lee,** . . . . . | 295.27 | |
| **Theodore Lyman,** . . . . . | 491.00 | |
| **Israel Munson,** . . . . . | 773.32 | |
| **Henry S. Nourse** (part, see p. 181), . . . . . | 1,466.18 | |
| **Francis E. Parker,** . . . . . | 3,360.75 | |
| **William Perkins,** . . . . . | 1,473.00 | |
| **Henry L. Pierce** (Residuary) (part, see pp. 104, 122), | 657.81 | |
| President's, . . . . . | 3,124.72 | |
| Retiring Allowance, . . . . . | 17,991.03 | |
| **John L. Russell,** . . . . . | 1,147.47 | |
| **Isaac Sweetser,** . . . . . | 2,303.42 | |
| **Seth Turner,** . . . . . | 245.50 | |
| **William F. Weld,** . . . . . | 2,952.76 | |
| Amounts carried forward, . . . . . | $63,210.36 | $9,001.00 |

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## TABLE NO. I, THE UNIVERSITY, CONTINUED.

### RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, | $63,210.36 | $9,001.00 |
| Gift from the Carnegie Foundation, to pay retiring allowances granted to persons connected with Harvard University, | 5,454.54 | |
| Care of the Sarah Winslow Fund, | 5.88 | |
| Sale of catalogues, calendars, directories, &c., | 1,179.00 | |
| " sand, | 50.00 | |
| Use of houses by College officers, | 1,550.00 | |
| Use of land by Harvard Union, | 1,260.00 | |
| Repayment for expenses in excess of cost, | 178.33 | |
| " of sewer assessment, | 27.00 | 72,915.11 |
| | | $81,916.11 |

### PAYMENTS.

| | | | |
|---|---|---|---|
| **Overseers' Expenses.** | | | |
| Printing President's Annual Report, | | $1,216.14 | |
| " Treasurer's " " | | 482.06 | |
| " other reports, ballots, etc., | | 163.80 | |
| Advertising, | | 75.73 | |
| Auditing Treasurer's accounts, | | 150.00 | |
| Other expenses, | | 39.58 | $2,127.31 |
| **Office Expenses.** | | | |
| President's, | | | |
| Clerical services, | $1,619.50 | | |
| Other expenses, | 606.30 | $2,225.80 | |
| Treasurer's, | | | |
| Clerical services, | $2,116.30 | | |
| Rent of safes, | 600.00 | | |
| Other expenses, | 976.45 | 3,692.75 | |
| Bursar's, | | | |
| Clerical services, | $5,150.94 | | |
| Other expenses, | 1,723.41 | 6,874.35 | |
| Publication Agent's, | | | |
| Clerical and other services, | $2,259.66 | | |
| Postage and stationery, | 901.38 | | |
| Other expenses, | 744.88 | 3,905.92 | |
| Inspector of Grounds and Buildings, | | | |
| Clerical and other services, | $898.89 | | |
| Improvements and repairs, | 18.16 | | |
| Other expenses, | 474.96 | 1,392.01 | |
| Janitor's, | | | |
| Sundry expenses, | | 63.32 | |
| Corporation Rooms (fuel, rent, &c.), | | 2,548.89 | 20,703.04 |
| Amount carried forward, | | | $22,830.35 |

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## Table No. I, The University, continued.

### PAYMENTS.

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $22,880.35 |
| **Salaries.** | | | |
| President, | | | |
| From the University, | $6,000.00 | | |
| " President's Fund, | 3,021.75 | | |
| " Thomas Cotton Fund, | 7.35 | $9,029.10 | |
| Treasurer, | | 6,000.00 | |
| Comptroller, | | 2,500.00 | |
| Bursar, | | 4,000.00 | |
| Assistant Bursar, | | 2,250.00 | |
| Secretary to the Corporation, | | 3,000.00 | |
| Assistant Secretary to the Corporation, | | 250.00 | |
| Secretary of the Board of Overseers, | | 200.00 | |
| Commencement Marshal, | | 100.00 | |
| Secretary for Appointments, | | 1,499.99 | |
| Regent, | | 1,000.00 | |
| Medical Visitor, | | 3,500.00 | |
| Publication Agent, | | 2,500.00 | |
| Inspector of Grounds and Buildings, | | 3,500.00 | |
| Clerks, Treasurer's office, | | 3,500.00 | |
| Bursar's Assistant, | | 2,000.00 | 44,829.09 |
| **Retiring Allowances.** | | | |
| From **Carnegie** Foundation (gift), | | $5,454.54 | |
| " Retiring Allowance Fund, | | 17,991.03 | |
| " University income, | | 2,016.91 | 25,462.48 |
| **Memorial Hall and Sanders Theatre.** | | | |
| Janitor service, | | $184.67 | |
| Lighting, | | 42.24 | |
| Heating, | | 2.37 | |
| Supplies, | | 8.50 | |
| Repairs, | | 74.33 | |
| Other expenses, | | 84.04 | 396.15 |
| **Payments made from University income on the following accounts: —** | | | |
| **Appleton** Chapel (part, see Table XIX, page 128), | | $6,361.22 | |
| **Phillips Brooks** House (part, see Table XX, page 129), | | 1,857.02 | |
| **William Hayes Fogg** Art Museum (part, see Table XVII, page 126), | | 2,927.08 | |
| **Germanic** Museum (part, see Table XVI, page 125), | | 75.32 | |
| **Peabody** Museum of American Archaeology and Ethnology (part, see Table XIV, page 124), | | 1,350.95 | |
| **Semitic** Museum (part, see Table XV, page 125), | | 1,500.00 | 14,071.59 |
| Amount carried forward, | | | $107,589.66 |

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## Table No. I, The University, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | | $107,589.66 |
| **General Expenses.** | | |
| Labor, | $8,009.82 | |
| Watchmen, | 2,067.00 | |
| University Gazette, | 878.75 | |
| Annual Catalogue, | 2,921.21 | |
| Quinquennial Catalogue, | 580.44 | |
| Expenses of Medical Visitor, | 139.12 | |
| Diplomas, | 39.40 | |
| Commencement Day expenses, | 646.15 | |
| Expenses on portraits in Memorial Hall, | 9.72 | |
| Printing the President's Speech on the Taxation of Colleges, | 173.99 | |
| Association of American Universities, conference, | 115.84 | |
| Celebration in Cambridge upon opening the new buildings of the Medical School, | 426.34 | |
| Other hospitality, | 250.83 | |
| Expenses of delegates to the Carnegie Institution, | 44.70 | |
| Legal services, | 1,710.00 | |
| Advertising, | 75.64 | |
| Insurance, | 42.31 | |
| Telephone, | 15.00 | |
| Mercantile agency, | 825.00 | |
| Fence, | 20.17 | |
| Plank walks, | 208.80 | |
| Driveways and gravel walks, | 50.73 | |
| Watering driveways and streets, | 422.19 | |
| Repairs and improvements, | 5,203.49 | |
| Taxes on Harvard Union, $4,743.00 | | |
| Less repaid by Harvard Union, 4,743.00 | | |
| To the City of Cambridge, towards the cost of improving the portion of Broadway and Kirkland streets adjacent to the Yard, | 10,000.00 | |
| Freight, supplies, and sundries, | 699.18 | 35,575.82 |
| | | $143,165.48 |

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## Table No. II.

## THE COLLEGE.

### RECEIPTS.

| | | |
|---|---|---|
| **Gifts for Capital Account.** | | |
| **Martin Brimmer** Fund, | $50,000.00 | |
| **Francis James Child** Memorial Fund (additional), | 50.00 | |
| Twenty-fifth Anniversary Fund of the **Class of 1881** (additional), | 10,596.48 | |
| Fund of the **Class of 1882,** | 53,863.36 | |
| **Class Subscription** Fund (additional), | 20.00 | |
| German Professorship Fund, | 350.00 | |
| **Edwin A. W. Harlow** Fund (additional), | 9,285.48 | |
| Boston Newsboys' Fund, | 2,667.16 | |
| **William Reed** Fund, | 4,000.00 | |
| **Nelson Robinson Jr.** Additional Fund (additional), | 25,000.00 | |
| **Shaler** Memorial Fund, | 32,238.23 | |
| Teachers' Endowment Fund (additional), | 89,269.00 | |
| **Jerome Wheelock** Fund (additional), | 10.00 | |
| **Willard** Scholarship Fund, | 10,000.00 | $287,349.66 |
| **Income of Funds for Instruction, and Gifts for Salaries.** | | |
| **Alford** Professorship, | $1,362.48 | |
| **John B. Barringer,** | 1,506.73 | |
| **Boylston** Professorship, | 1,391.35 | |
| **Martin Brimmer,** | 2,148.13 | |
| **Class of 1880** (part, pp. 104, 121), | 3,590.13 | |
| **Class Subscription,** | 7,395.54 | |
| **Paul Dudley,** | 185.06 | |
| **Eaton** Professorship, | 5,229.94 | |
| **Eliot** Professorship, | 1,061.49 | |
| **Eliot** " **(Jon. Phillips' Gift),** | 350.00 | |
| **Calvin** and **Lucy Ellis** Aid (part, see p. 88), | 4,841.62 | |
| **Erving** Professorship, | 171.85 | |
| **Fisher** " | 1,767.16 | |
| **Henry Flynt,** | 20.57 | |
| Fund for Permanent Tutors, | 797.38 | |
| **Godkin** Lecture, | 665.65 | |
| Gospel Church (½ income, see p. 131), | 170.64 | |
| **Asa Gray** Professorship, | 1,053.24 | |
| **Gurney** (part, see p. 131), | 8,656.84 | |
| **Hersey** Professorship (⅔ income, see p. 111), | 595.60 | |
| **Hersey** Professorship (**Thomas Lee's gift**), | 1,067.63 | |
| **Hollis** " (Divinity), | 1,694.83 | |
| **Hollis** " (Mathematics), | 183.92 | |
| Amounts carried forward, | $45,907.78 | $287,349.66 |

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TABLE No. II, THE COLLEGE, CONTINUED.

RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $45,907.78 | $287,349.66 |
| Income of Funds for Instruction, and Gifts for Salaries (*continued*). | | |
| **Ingersoll** Lecture (part, see p. 90), . . . . . | 226.17 | |
| **Abbott Lawrence,** . . . . . | 8,021.42 | |
| **James Lawrence,** . . . . . | 2,473.41 | |
| Lectures on Political Economy, . . . . . | 534.31 | |
| **Henry Lee** Professorship, . . . . . | 5,405.13 | |
| **Thomas Lee,** for Reading, . . . . . | 775.63 | |
| **Arthur T. Lyman,** . . . . . | 1,227.50 | |
| **McLean** Professorship, . . . . . | 2,114.39 | |
| **William Belden Noble** Lectures, . . . . . | 1,204.67 | |
| **Francis Greenwood Peabody** (part, see p. 90), . . . . . | 1,450.00 | |
| **Daniel H. Peirce,** . . . . . | 703.80 | |
| **Perkins** Professorship, . . . . . | 1,031.10 | |
| **Plummer** Foundation, . . . . . | 1,228.48 | |
| **Pope** Professorship, . . . . . | 2,577.75 | |
| Professorship of Engineering, . . . . . | 2,003.58 | |
| Professorship of Hygiene (part, see p. 131), . . | 9,389.69 | |
| **Nelson Robinson Jr.** (part, see pp. 85, 90), . | 21,090.59 | |
| " " " Additional (part, see p. 90), | 1,000.00 | |
| **Arthur Rotch,** . . . . . | 1,227.50 | |
| **Rumford** Professorship, . . . . . | 2,767.72 | |
| **Gurdon Saltonstall,** . . . . . | 2,946.00 | |
| **Smith** Professorship, . . . . . | 1,136.18 | |
| **Josiah Stickney,** . . . . . | 616.70 | |
| Teachers' Endowment, . . . . . | 91,320.89 | |
| Unknown Memorial (part, see p. 90), . . . . . | 3,206.83 | |
| **Henry Villard,** . . . . . | 1,476.38 | |
| **Henry W. Wales** (part, see p. 103). | | |
| **Wales** Professorship, . . . . . | 1,500.00 | |
| **Henry C. Warren** (part, see p. 90), . . . . | 4,000.00 | |
| **Sylvester Waterhouse,** . . . . . | 316.25 | |
| **David A. Wells** (part, see pp. 89, 90), . . . | 4,250.00 | |
| **Jerome Wheelock,** . . . . . | 1.92 | |
| Gifts for salaries and lectures, . . . . . | 2,325.00 | 230,456.77 |
| Income of Funds for General Purposes. | | |
| **John W. P. Abbot** (accumulating), . . . . | $529.30 | |
| **John A. Blanchard,** . . . . . | 51.56 | |
| **Edward W. Codman,** . . . . . | 16,070.44 | |
| **Jonathan Phillips,** . . . . . | 1,546.65 | |
| **William M. Spackman,** . . . . . | 122.75 | |
| Twenty-fifth Anniversary Fund of the **Class of 1881,** . . . . . | 4,680.80 | 23,001.50 |
| Amount carried forward, . . . . . | | $530,807.93 |

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TABLE No. II, THE COLLEGE, CONTINUED.

RECEIPTS.

| | | |
|---|---|---|
| Amount brought forward, . . . . | | $530,807.98 |
| Income of Fellowship Funds, and Gifts for Fellowships. | | |
| **Julia Amory Appleton,** . . . . . | $989.76 | |
| **Edward Austin** (part, see pp. 85, 88, 111, 116). | | |
| **Edward Austin** Fellowships, . . . . . | 2,000.00 | |
| **Austin** Teaching " . . . . . | 11,275.00 | |
| Cercle Français de l'Université **Harvard** (gift), | 600.00 | |
| **George W. Dillaway,** . . . . . | 262.64 | |
| **Ozias Goodwin** Memorial, . . . . . | 559.50 | |
| **Harris,** . . . . . | 536.37 | |
| **Edward William Hooper,** . . . . . | 1,282.20 | |
| **John Thornton Kirkland,** . . . . . | 562.24 | |
| **Henry Lee** Memorial, . . . . . | 587.43 | |
| **Charles Eliot Norton,** . . . . . | 600.69 | |
| **Robert Treat Paine,** . . . . . | 643.46 | |
| **John Parker,** . . . . . | 2,900.24 | |
| **Francis Parkman,** . . . . . | 505.53 | |
| **Nelson Robinson Jr.** (part, see pp. 84, 90). | | |
| **Nelson Robinson Jr.** Fellowship, . . . | 500.00 | |
| **Rogers,** . . . . . | 1,605.86 | |
| **Henry Bromfield Rogers** Memorial, . . . | 601.13 | |
| South End House (gifts), . . . . . | 350.00 | |
| **John Tyndall,** . . . . . | 587.73 | |
| **James Walker,** . . . . . | 567.89 | |
| **Whiting,** . . . . . | 1,171.03 | 28,688.70 |
| Income of Scholarship Funds, and Gifts for Scholarships. | | |
| **Abbot,** . . . . . | $188.94 | |
| **Alford** (accumulating), . . . . . | 111.85 | |
| **Edward Austin** (part, see pp. 85, 88, 111, 116). | | |
| **Austin** Scholarships in Architecture, . . . | 300.00 | |
| " " for Teachers, . . . . | 3,100.00 | |
| **Bartlett,** . . . . . | 265.43 | |
| **Bassett,** . . . . . | 278.99 | |
| **Bigelow,** . . . . . | 662.08 | |
| **Borden** (accumulating), . . . . . | 139.69 | |
| **Bowditch,** . . . . . | 5,638.84 | |
| **Bright** Scholarships. | | |
| Interest on balance, . . . . . $185.30 | | |
| **Bright** Legacy (½ income, see p. 103), 1,227.50 | 1,412.80 | |
| **Browne,** . . . . . | 192.47 | |
| **Morey Willard Buckminster,** . . . . . | 267.25 | |
| **Burr,** . . . . . | 1,683.69 | |
| **Ruluff Sterling Choate,** . . . . . | 303.44 | |
| Amounts carried forward, . . . . | $14,545.47 | $559,496.68 |

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TABLE No. II, THE COLLEGE, CONTINUED.

RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $14,545.47 | $559,496.63 |
| Income of Scholarship Funds, and Gifts for Scholarships (*continued*). | | |
| **Class of 1802**, . . . . . | 417.50 | |
| " **1814**, . . . . . | 160.85 | |
| " **1815 (Kirkland)**, . . . . . | 330.39 | |
| " **1817**, . . . . . | 229.98 | |
| " **1828**, . . . . . | 174.11 | |
| " **1835**, . . . . . | 251.15 | |
| " **1841**, . . . . . | 257.82 | |
| " **1852 (Dana)**, . . . . . | 257.77 | |
| " **1856**, . . . . . | 791.44 | |
| " **1867**, . . . . . | 289.41 | |
| " **1877**, . . . . . | 255.66 | |
| " **1883**, . . . . . | 301.13 | |
| **Crowninshield**, . . . . . | 602.65 | |
| **Warren H. Cudworth** (gift), . . . . . | 600.00 | |
| **Francis H. Cummings**, . . . . . | 300.00 | |
| **George** and **Martha Derby**, . . . . . | 274.76 | |
| **Julius Dexter**, . . . . . | 256.94 | |
| **Orlando W. Doe**, . . . . . | 142.05 | |
| Department of Education (gift), . . . . . | 500.00 | |
| **William Samuel Eliot**, . . . . . | 271.57 | |
| **George H. Emerson** (part, see p. 131), . . | 1,411.26 | |
| **Joseph Eveleth** (part, see p. 112), . . . . . | 1,453.56 | |
| Fall River, . . . . . | 109.00 | |
| **Farrar**, . . . . . | 315.27 | |
| **Richard Augustine Gambrill**, . . . . . | 574.03 | |
| **Charles Haven Goodwin**, . . . . . | 384.36 | |
| **Benjamin D. Greene**, . . . . . | 216.53 | |
| **Price Greenleaf** (part, see pp. 88, 103, 104). | | |
| **Price Greenleaf** Scholarships, . . . . . | 3,000.00 | |
| **Harvard** Club of Buffalo (gift), . . . . . | 200.00 | |
| " " Chicago " . . . . . | 300.00 | |
| " " Louisiana (gift), . . . . . | 208.51 | |
| " " St. Louis " . . . . . | 300.00 | |
| **John Appleton Haven**, . . . . . | 512.85 | |
| **William Hilton** (part, see p. 112), . . . . . | 747.45 | |
| **Ebenezer Rockwood Hoar**, . . . . . | 541.28 | |
| **Levina Hoar**, for the town of Lincoln, . . . . | 317.24 | |
| **R. M. Hodges** (part, see p. 104). | | |
| **Hodges** Scholarship, . . . . . | 296.66 | |
| **Hollis**, . . . . . | 315.86 | |
| **Henry B. Humphrey**, . . . . . | 541.38 | |
| **Hennen Jennings**, . . . . . | 542.31 | |
| Amounts carried forward, . . . . | $33,448.20 | $559,496.63 |

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TABLE NO. II, THE COLLEGE, CONTINUED.

RECEIPTS.

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $33,448.20 | $559,496.63 |
| Income of Scholarship Funds, and Gifts for Scholarships (*continued*). | | | |
| **Charles L. Jones,** . . . . . | | 1,539.87 | |
| **Lawrence** Scientific School Association (gift), | | 150.00 | |
| **George Emerson Lowell,** . . . . . | | 523.75 | |
| **Markoe,** . . . . . | | 266.07 | |
| **Matthews** Scholarships. | | | |
| Interest on balance, . . . . . | $192.57 | | |
| **Matthews** Hall, half net rents, . . | 4,845.74 | 5,038.31 | |
| **William Merrick,** . . . . . | | 310.46 | |
| **Morey,** . . . . . | | 415.63 | |
| **Lady Mowlson,** . . . . . | | 291.66 | |
| Boston Newsboys'. Income, . . . . . | $103.65 | | |
| Gift, . . . . . | 50.00 | 153.65 | |
| **Howard Gardner Nichols,** . . . . . | | 285.22 | |
| **Lucy Osgood,** . . . . . | | 304.18 | |
| **George Foster Peabody,** . . . . . | | 316.20 | |
| **Pennoyer,** . . . . . | | 336.53 | |
| **Rebecca A. Perkins,** . . . . . | | 220.12 | |
| Philadelphia, . . . . . | | 540.79 | |
| **Wendell Phillips** Memorial, . . . . . | | 80.18 | |
| **William Reed,** . . . . . | | 77.50 | |
| **Ricardo** Prize (gift), . . . . . | | 350.00 | |
| **Rodger,** . . . . . | | 62.80 | |
| **Henry Bromfield Rogers,** . . . . . | | 173.81 | |
| **Edward Russell,** . . . . . | | 287.92 | |
| **Sales,** . . . . . | | 282.37 | |
| **Saltonstall,** . . . . . | | 562.24 | |
| **Leverett Saltonstall,** . . . . . | | 428.89 | |
| **Mary Saltonstall,** . . . . . | | 348.36 | |
| **James Savage** (part, see pp. 104, 121). | | | |
| **Savage** Scholarship, . . . . . | | 300.00 | |
| **Sever,** . . . . . | | 160.31 | |
| **Sewall,** . . . . . | | 559.15 | |
| **Shattuck,** . . . . . | | 2,447.54 | |
| **Slade,** . . . . . | | 304.42 | |
| **Dunlap Smith,** . . . . . | | 201.13 | |
| **Story,** . . . . . | | 225.86 | |
| **Stoughton.** Use of pasture, . . . . . | $100.00 | | |
| Interest, . . . . . | 94.47 | 194.47 | |
| **Swift,** . . . . . | | 190.75 | |
| **Thayer,** . . . . . | | 3,956.43 | |
| **Gorham Thomas,** . . . . . | | 214.57 | |
| Amounts carried forward, . . . . | | $55,549.34 | $559,496.63 |

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## Table No. II, The College, continued.

### RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . | $55,549.34 | $559,496.68 |
| **Income of Scholarship Funds and Gifts for Scholarships** (*continued*). | | |
| **Toppan**, . . . . . | 385.58 | |
| **Townsend**, . . . . . | 1,281.51 | |
| **Walcott**, . . . . . | 251.93 | |
| **Christopher M. Weld**, . . . . . | 532.59 | |
| **Jacob Wendell**, . . . . . | 270.05 | |
| **Whiting**, . . . . . | 586.21 | |
| **Josiah Dwight Whitney**, . . . . . | 249.67 | |
| **Mary L. Whitney**, . . . . . | 576.57 | |
| **Willard** Scholarship, . . . . . | 61.38 | |
| **Charles Wyman**, . . . . . | 500.97 | |
| Anonymous Gift for Scholarship use, . . . . . | 100.00 | 60,345.80 |
| **Income of Beneficiary and Loan Funds, and Repayments.** | | |
| **Rebecca C. Ames.** | | |
| Interest, . . . . . $2,561.84 | | |
| Loan repaid, . . . . . 105.00 | $2,666.84 | |
| **Nathaniel Appleton**, . . . . . | 31.03 | |
| **Edward Austin** (see pp. 85², 111, 116). | | |
| For Loans, . . . . . $4,442.84 | | |
| Loans repaid by Special Students, . 40.00 | 4,482.84 | |
| **Edward Austin** Loans Repaid (L. S. S.), . . | 1,900.85 | |
| **Frank Bolles** Memorial, . . . . . | 97.86 | |
| **William Brattle**, . . . . . | 77.48 | |
| **Daniel A. Buckley**, . . . . . | 7,762.56 | |
| **Walter Channing Cabot**, . . . . . | 2,490.20 | |
| **Edward Erwin Coolidge** (part, see p. 79), | 500.00 | |
| **Thomas Danforth**, . . . . . | 52.93 | |
| **Moses Day**, . . . . . | 267.55 | |
| **Calvin** and **Lucy Ellis** Aid (part, see p. 83), | 2,217.98 | |
| **John Ellery**, . . . . . | 22.19 | |
| Exhibitions, . . . . . | 65.45 | |
| **Thomas Fitch**, . . . . . | 40.31 | |
| **Ephraim Flynt**, . . . . . | 23.91 | |
| **Henry Flynt**, . . . . . | 8.30 | |
| **Henry Gibbs**, . . . . . | 24.84 | |
| **John Glover**, . . . . . | 164.68 | |
| **Price Greenleaf** (part, see pp. 86, 103, 104). | | |
| **Price Greenleaf** Aid. Interest, $17,265.65 | | |
| Repayment, . . . . . 100.00 | 17,365.65 | |
| **Edwin A. W. Harlow**, . . . . . | 316.99 | |
| **Edward Holyoke**, . . . . . | 18.56 | |
| Amounts carried forward, . . . . . | $40,599.00 | $619,842.43 |

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## Table No. II, The College, continued.

### RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . | $40,599.00 | $619,842.48 |
| **Income of Beneficiary and Loan Funds, and Repayments (*continued*).** | | |
| **Robert Keayne,** . . . . . | 119.85 | |
| **Bertram Kimball,** . . . . . | 1,227.50 | |
| **Lawrence** Scientific School Loan, repayments, | 1,172.26 | |
| **Mary Lindall,** . . . . . | 51.90 | |
| **Susan B. Lyman,** . . . . . | 294.06 | |
| **Anne Mills,** . . . . . | 11.64 | |
| **Munroe,** . . . . . | 585.53 | |
| **Palfrey** Exhibition, . . . . . | 101.93 | |
| **Dr. Andrew P. Peabody** Memorial. | | |
| Interest, . . . . . $244.52 | | |
| Repayment, . . . . . 50.00 | 294.52 | |
| Scholarship and Beneficiary Money Returned. | | |
| Loans repaid, . . . . . | 1,286.56 | |
| **Joseph Sewall,** . . . . . | 11.10 | |
| **Alexander W. Thayer** (part, see p. 131), . | 267.84 | |
| **Quincy Tufts,** . . . . . | 547.71 | |
| **Benjamin Wadsworth,** . . . . . | 14.98 | |
| **Stuart Wadsworth Wheeler.** | | |
| Interest, . . . . . $302.26 | | |
| Loans repaid, . . . . . 3.00 | 305.26 | |
| Anonymous Gift for beneficiary use in the Graduate School of Arts and Sciences, . . . . . | 200.00 | 47,041.64 |
| **Income of Prize Funds, and gifts for prizes.** | | |
| **Jeremy Belknap** (gift), . . . . . | $50.00 | |
| **James Gordon Bennett,** . . . . . | 82.24 | |
| **Philo Sherman Bennett,** . . . . . | 20.72 | |
| **Francis Boott** (part, see p. 90), . . . . . | 190.00 | |
| **Bowdoin** Prizes for Dissertations, . . . . . | 1,542.48 | |
| **Boylston** Prizes for Elocution, . . . . . | 158.74 | |
| **Coolidge** Debating, . . . . . | 265.24 | |
| **Lloyd McKim Garrison,** . . . . . | 132.28 | |
| **Edward Hopkins** Gift for "Deturs." | | |
| From Trustees, . . . . . $206.47 | | |
| Interest on balance, . . . . . 96.38 | 302.85 | |
| **Sales,** . . . . . | 53.72 | |
| **John O. Sargent,** . . . . . | 128.69 | |
| **George B. Sohier** (part, see p. 103), . . . . | 250.00 | |
| **Charles Sumner,** . . . . . | 186.19 | |
| **Robert N. Toppan,** . . . . . | 193.65 | |
| **Philip Washburn,** . . . . . | 109.59 | |
| **David A. Wells** (part, see pp. 84, 90), . . . | 560.00 | 4,226.39 |
| Amount carried forward, . . . . . | | $671,110.46 |

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TABLE NO. II, THE COLLEGE, CONTINUED.

RECEIPTS.

| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $671,110.46 |
| Income of Sundry Funds for Special Purposes. | | |
| Botanic Department (part, see p. 119). | | |
| One-fourth for Cryptogamic Herbarium, . . | $488.30 | |
| One-eighth for Laboratories of Botany, . . | 244.15 | |
| **William H. Baldwin, Jr. 1885,** . . . . . | 284.19 | |
| **Francis Boott** (part, see p. 89), . . . . . | 336.35 | |
| **Francis James Child** Memorial, . . . . . | 570.69 | |
| Classical Publication Fund of the **Class of 1856.** | | |
| Interest, . . . . . $348.86 | | |
| Sales, . . . . . 140.61 | 489.47 | |
| Book Fund of the **Class of 1881,** . . . . . | 170.87 | |
| **George A. Gardner,** . . . . . | 284.49 | |
| **George Silsbee and Ellen Sever Hale,** . | 271.92 | |
| **Harvard** Oriental Series, . . . . . | 741.51 | |
| **Ingersoll** Lecture (part, see p. 84), . . . . . | 67.50 | |
| Music Department, . . . . . | 53.37 | |
| **Francis Greenwood Peabody** (part, see p. 84), | 3,675.99 | |
| **Nelson Robinson Jr.** (part, see pp. 84, 85). | | |
| Interest, . . . . . $4,186.91 | | |
| Sales, . . . . . 582.77 | 4,769.68 | |
| **Nelson Robinson Jr.** Additional (part, see p. 84), . . . . . | 176.34 | |
| **Robert W. Sayles,** . . . . . | 251.30 | |
| **George William Sawin,** . . . . . | 236.42 | |
| **Shaler** Memorial, . . . . . | 810.64 | |
| **John E. Thayer,** . . . . . | 817.76 | |
| **Elizabeth Torrey,** . . . . . | 51.46 | |
| **Henry Warren Torrey.** Interest, . $568.78 | | |
| Sales, . . 161.47 | 730.25 | |
| Unknown Memorial (part, see p. 84), . . . . . | 1,800.00 | |
| **Cyrus M. Warren,** . . . . . | 318.76 | |
| **Henry C. Warren** (part, see p. 84), . . . . | 1,654.70 | |
| **David A. Wells** (part, see pp. 84, 89), . . . | 809.00 | |
| **Chauncey Wright,** . . . . . | 55.34 | 20,160.45 |
| Sundry Gifts. | | |
| For the Department of Anthropology, . . . . . | $25.00 | |
| For the Department of Architecture. | | |
| Gift, . . . . . $400.00 | | |
| Interest, . . . . . 80.68 | 480.68 | |
| For the Department of the Classics. | | |
| Sales of publications, . . . . . | 213.33 | |
| For the Department of Economics. | | |
| For books, . . . . . $40.00 | | |
| For publishing a thesis, . . . . . 500.00 | 540.00 | |
| Amounts carried forward, . . . . | $1,259.01 | $691,270.91 |

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## Table No. II, The College, continued.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $1,259.01 | $691,270.91 |
| **Sundry Gifts** (*continued*). | | | |
| For the Department of Geology, for a seismograph, | | 685.00 | |
| For the Department of Latin, for equipment for "Latin 10," . . . . . | | 200.00 | |
| For the Department of Mining and Metallurgy. | | | |
| Interest, . . . . . | | 18.60 | |
| For the Department of Music, . . . . . | | 140.00 | |
| For the Department of Sanskrit. | | | |
| Interest, . . . . . | $10.44 | | |
| Sales of publications, . . . . . | 582.69 | 593.13 | |
| For the Philosophical Library | | | |
| Gifts, . . . . . | $24.91 | | |
| Interest, . . . . . | 7.99 | 32.90 | |
| For extra copies of Contributions from the Zoölogical Laboratory, . . . . . | | 75.00 | |
| For the Bermuda Biological Station. | | | |
| Gifts, . . . . . | $500.00 | | |
| Interest, . . . . . | 34.06 | 534.06 | |
| Towards the travelling expenses and support at Harvard University of Chinese students in addition to the sixteen students sent by the Chinese Government in 1906–07, . . . . . | | 2,500.00 | |
| For publishing Harvard Psychological Studies. | | | |
| Gift, . . . . . | $1,106.02 | | |
| Sales, . . . . . | 9.00 | 1,115.02 | |
| For the School for Social Workers. | | | |
| Gift, . . . . . | $500.00 | | |
| Interest, . . . . . | 39.85 | 539.85 | |
| For the Ethics of the Social Questions. Interest, | | 4.32 | |
| For furnishings of the Department of Social Ethics in Emerson Hall. Interest, . . . . . | | 16.90 | |
| For furnishing Emerson Hall. | | | |
| Gift, . . . . . | $2,500.00 | | |
| Interest, . . . . . | 53.42 | 2,553.42 | |
| For furnishing the Common-Room in Conant Hall. | | 500.00 | |
| For evening use of Warren House libraries. | | | |
| Gift, . . . . . | $53.00 | | |
| Less included in gifts for service in Department Libraries, . . . . . | 40.00 | 13.00 | |
| For Plantations in the College Yard. Interest, . | | 68.90 | 10,849.11 |
| Amount carried forward, . . . . . | | | $702,120.02 |

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## Table No. II, The College, continued.

### RECEIPTS.

| | | | | |
|---|---|---|---|---|
| Amount brought forward, . . . . . | | | | $702,120.02 |
| **Receipts from students.** | | | | |
| Tuition fees. | | | | |
| College. | Regular Programme | Additional Courses | | |
| Regular, . . . . . | $292,620.00 | $28,260.71 | | |
| Special, . . . . . | 35,664.00 | 1,596.01 | | |
| Lawrence Scientific School, . . . . . | 29,410.00 | 594.00 | | |
| | $357,694.00 | $30,450.72 | | |
| Graduate School of Arts and Sciences, . | 46,285.00 | 143.34 | | |
| Applied Science, . . | 4,450.00 | | | |
| School for Social Workers, . . . . | 253.33 | | | |
| Radcliffe students in University courses, | 2,735.00 | | | |
| For afternoon and Saturday courses for teachers, . . | 2,370.00 | | | |
| Summer Schools in Cambridge, . . . | 22,472.00 | | | |
| | $436,259.33 | $30,594.06 | $466,853.39 | |
| Registration fees. Summer Schools in Cambridge. . . . . | | | 1,564.00 | |
| Examination fees. | | | | |
| Admission, . . . . . | | $9,395.48 | | |
| Condition, make-up and advanced standing, . . . . . | | 3,483.00 | | |
| Doctor of Philosophy, . . . . . | | 30.00 | 12,908.48 | |
| Graduation fees, . . . . . | | | 7,840.00 | |
| Laboratory fees. | | | | |
| Astronomy, . . . . . | | $470.00 | | |
| Botany, . . . . . | | 1,210.00 | | |
| Chemistry, . . . . . | | 14,426.71 | | |
| Engineering, . . . . . | | 2,806.50 | | |
| Engineering, Squam Lake, . . . | | 1,935.00 | | |
| Geology, . . . . . | | 1,415.00 | | |
| Hygiene, . . . . . | | 1,670.00 | | |
| Mineralogy, . . . . . | | 375.00 | | |
| Mining and Metallurgy, . . . . . | | 3,106.13 | | |
| Philosophy, . . . . . | | 90.00 | | |
| Physics, . . . . . | | 4,646.00 | | |
| Zoölogy, . . . . . | | 1,477.50 | 33,627.84 | |
| Amounts carried forward, . . . . . | | | $522,793.71 | $702,120.02 |

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## Table No. II, The College, continued.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . . | | $522,793.71 | $702,120.02 |
| **Receipts from Students (*continued*).** | | | |
| College dormitories, . . . . . | $99,678.33 | | |
| Less the following items: — | | | |
| Receipts from dormitories belonging to University Houses and Lands account, credited under income of the Funds which constitute the principal of this account, | $15,873.33 | | |
| One-half net income from Matthews Hall, credited under income of Matthews Scholarships, . . | 4,845.74 20,719.07 | 78,959.26 | |
| Summer School excursions, surplus, . . . . . | | 155.02 | 601,907.99 |
| **Sundries.** | | | |
| Repayment, balances of special appropriations to be used by Professor Shaler. | | | |
| For clerical assistance, . . . . . | $169.62 | | |
| For loans in Lawrence Scientific School, . . . . . | 72.82 | $242.44 | |
| Repayment of part of a special appropriation for specimens for the Department of Mineralogy and Petrography, . . . . . | | 115.00 | |
| Sale of tickets to Commencement Lunch, . . . . | | 422.00 | |
| " University Hymn Books, . . . . . | | 305.02 | |
| " Annals of Mathematics, . . . . . | | 395.74 | |
| " Propositions in Geometry, . . . . . | | 111.84 | |
| " Infinite Series, . . . . . | | 79.99 | |
| " Manual of Engineering, . . . . . | | 211.15 | |
| " Elementary Exercises in Physics, . . . . | | 170.45 | |
| " Hand-book of American History, . . . . | | 137.20 | |
| " History 1 publications, . . . . . | | 524.67 | |
| " Harvard Economic Studies, . . . . . | | 144.79 | |
| " Report on Examinations in English for Admission, . . . . . | | 222.39 | |
| " old examination papers, . . . . . | | 493.22 | |
| " other publications, . . . . . | | 1,034.01 | |
| Sundry receipts at the Engineering Camp at Squam Lake, . . . . . | | 8,984.16 | |
| Pasturage, Squam Lake, . . . . . | | 55.00 | |
| Interest on bank deposit, Squam Lake account, . | | 41.76 | |
| " account of tuition fees paid in advance, | | 2,127.06 | |
| Insurance awards, . . . . . | | 30.00 | |
| " premiums repaid, . . . . . | | 17.86 | 15,865.75 |
| | | | $1,319,893.76 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| From Fellowship Funds and Gifts. | | |
| **Julia Amory Appleton,** | $1,500.00 | |
| **Edward Austin** (part, see pp. 94, 97, 116). | | |
| **Edward Austin** Fellowships, | 2,000.00 | |
| **Austin,** Teaching " | 11,275.00 | |
| Cercle Français de l'Université **Harvard,** | 600.00 | |
| **George W. Dillaway,** | 150.00 | |
| **Ozias Goodwin** Memorial, | 225.00 | |
| **Harris,** | 500.00 | |
| **Edward William Hooper,** | 1,750.00 | |
| **John Thornton Kirkland,** | 900.00 | |
| **Henry Lee** Memorial, | 450.00 | |
| **Charles Eliot Norton,** | 600.00 | |
| **Robert Treat Paine,** | 500.00 | |
| **John Parker,** | 2,250.00 | |
| **Francis Parkman,** | 450.00 | |
| **Nelson Robinson Jr.** (part, see p. 98). | | |
| **Nelson Robinson Jr.** Fellowship, | 500.00 | |
| **Rogers,** | 1,087.50 | |
| **Henry Bromfield Rogers** Memorial, | 450.00 | |
| South End House, | 350.00 | |
| **John Tyndall,** | 500.00 | |
| **James Walker,** | 500.00 | |
| **Whiting,** | 600.00 | $27,137.50 |
| From Scholarship Funds and Gifts. | | |
| **Abbot,** | $150.00 | |
| **Edward Austin** (part, see pp. 94, 97, 113, 116). | | |
| **Austin** Scholarships in Architecture, $300.00 | | |
| **Austin** Scholarships for Teachers, 3,100.00 | 3,400.00 | |
| **Bartlett,** | 250.00 | |
| **Bassett,** | 270.00 | |
| **Bigelow,** | 600.00 | |
| **Bowditch,** | 5,000.00 | |
| **Bright** Scholarships, | 1,125.00 | |
| **Browne,** | 150.00 | |
| **Morey Willard Buckminster,** | 200.00 | |
| **Burr,** | 1,200.00 | |
| **Ruluff Sterling Choate,** | 275.00 | |
| **Class of 1802,** | 325.00 | |
| " **1814,** | 125.00 | |
| " **1815 (Kirkland),** | 250.00 | |
| " **1817,** | 175.00 | |
| " **1828,** | 150.00 | |
| " **1835,** | 185.00 | |
| Amounts carried forward, | $13,830.00 | $27,137.50 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . | $13,880.00 | $27,137.50 |
| From Scholarship Funds and Gifts (*continued*). | | |
| Class of 1841, . . . . . | 200.00 | |
| " 1852 (Dana), . . . . . | 200.00 | |
| " 1856, . . . . . | 600.00 | |
| " 1867, . . . . . | 175.00 | |
| " 1877, . . . . . | 200.00 | |
| " 1883, . . . . . | 225.00 | |
| Crowninshield, . . . . . | 450.00 | |
| Warren H. Cudworth, . . . . . | 600.00 | |
| Francis H. Cummings, . . . . . | 225.00 | |
| George and Martha Derby, . . . . . | 250.00 | |
| Julius Dexter, . . . . . | 220.00 | |
| Orlando W. Doe, . . . . . | 100.00 | |
| Department of Education, . . . . . | 250.00 | |
| William Samuel Eliot, . . . . . | 250.00 | |
| George H. Emerson (part, see p. 131), . . | 900.00 | |
| Joseph Eveleth (part, see p. 113), . . . . . | 1,000.00 | |
| Fall River, . . . . . | 80.00 | |
| Farrar, . . . . . | 250.00 | |
| Richard Augustine Gambrill, . . . . . | 450.00 | |
| Charles Haven Goodwin, . . . . . | 300.00 | |
| Greene, . . . . . | 150.00 | |
| Price Greenleaf (part, see pp. 97, 104). | | |
| Price Greenleaf Scholarships, . . . . . | 3,000.00 | |
| Harvard Club of Buffalo, . . . . . | 200.00 | |
| " " Chicago, . . . . . | 300.00 | |
| " " Louisiana, . . . . . | 208.51 | |
| " " St. Louis, . . . . . | 300.00 | |
| John Appleton Haven, . . . . . | 480.00 | |
| William Hilton, . . . . . | 450.00 | |
| Ebenezer Rockwood Hoar, . . . . . | 425.00 | |
| Levina Hoar, for the town of Lincoln, . . . . | 250.00 | |
| R. M. Hodges. | | |
| Hodges Scholarship, . . . . . | 250.00 | |
| Hollis, . . . . . | 250.00 | |
| Henry B. Humphrey, . . . . . | 450.00 | |
| Hennen Jennings, . . . . . | 425.00 | |
| Charles L. Jones, . . . . . | 1,200.00 | |
| George Emerson Lowell, . . . . . | 420.00 | |
| Markoe, . . . . . | 150.00 | |
| Matthews, . . . . . | 4,680.00 | |
| William Merrick, . . . . . | 225.00 | |
| Morey, . . . . . | 325.00 | |
| Lady Mowlson, . . . . . | 225.00 | |
| Amounts carried forward, . . . | $35,118.51 | $27,137.50 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . | $35,118.51 | $27,137.50 |
| From Scholarship Funds and Gifts (*continued*). | | |
| Boston Newsboys', . . . . . | 150.00 | |
| **Howard Gardner Nichols,** . . . . . | 225.00 | |
| **Lucy Osgood,** . . . . . | 315.00 | |
| **George Foster Peabody,** . . . . . | 150.00 | |
| **Pennoyer,** . . . . . | 155.00 | |
| **Rebecca A. Perkins,** . . . . . | 150.00 | |
| Philadelphia, . . . . . | 425.00 | |
| **Wendell Phillips** Memorial, . . . . . | 50.00 | |
| **Ricardo** Prize, . . . . . | 350.00 | |
| **Henry Bromfield Rogers,** . . . . . | 120.00 | |
| **Edward Russell,** . . . . . | 225.00 | |
| **Sales,** . . . . . | 200.00 | |
| **Saltonstall,** . . . . . | 425.00 | |
| **Leverett Saltonstall,** . . . . . | 325.00 | |
| **Mary Saltonstall,** . . . . . | 300.00 | |
| **James Savage** (part). | | |
| **Savage** Scholarship, . . . . . | 300.00 | |
| **Sever,** . . . . . | 150.00 | |
| **Sewall,** . . . . . | 480.00 | |
| **Shattuck,** . . . . . | 2,040.00 | |
| **Slade,** . . . . . | 290.00 | |
| **Dunlap Smith,** . . . . . | 220.00 | |
| **Story,** . . . . . | 175.00 | |
| **Stoughton,** . . . . . | 100.00 | |
| **Thayer,** . . . . . | 3,240.00 | |
| **Gorham Thomas,** . . . . . | 150.00 | |
| **Toppan,** . . . . . | 300.00 | |
| **Townsend,** . . . . . | 1,000.00 | |
| **Walcott,** . . . . . | 200.00 | |
| **Christopher M. Weld,** . . . . . | 400.00 | |
| **Jacob Wendell,** . . . . . | 300.00 | |
| **Whiting,** . . . . . | 420.00 | |
| **Josiah Dwight Whitney,** . . . . . | 240.00 | |
| **Mary L. Whitney,** . . . . . | 300.00 | |
| **Charles Wyman,** . . . . . | 400.00 | |
| University, Graduate School of Arts and Sciences, | 1,890.00 | |
| " " " Applied Science, . | 600.00 | |
| " **Lawrence** Scientific School, . . . | 1,240.00 | |
| Normal, " " " . . . | 600.00 | |
| Architectural League, . . . . . | 110.00 | 53,828.51 |
| From Beneficiary and Loan Funds. | | |
| **Rebecca C. Ames,** . . . . . | $1,773.00 | |
| Amounts carried forward, . . . . . | $1,773.00 | $80,966.01 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $1,773.00 | $80,966.01 |
| From Beneficiary and Loan Funds (*continued*). | | |
| **Edward Austin** (part, see pp. 94[2], 113, 116). | | |
| Loans to L. S. S. students, . . . $1,970.00 | | |
| " Special " . . . 744.76 | 2,714.76 | |
| **Edward Austin** Loans Repaid (L.S.S.), . . | 1,194.60 | |
| **Frank Bolles** Memorial, . . . . . | 25.00 | |
| **Walter Channing Cabot,** . . . . . | 2,403.99 | |
| **Edward Erwin Coolidge,** . . . . . | 500.00 | |
| **Moses Day,** . . . . . | 261.01 | |
| **Calvin** and **Lucy Ellis** Aid. | | |
| Beneficiaries, . . . . . | 1,865.00 | |
| Exhibitions, . . . . . | 63.85 | |
| **Price Greenleaf** (part, see pp. 95, 104). | | |
| **Price Greenleaf** Aid, . . . . . | 14,240.66 | |
| **Edwin A. W. Harlow,** . . . . . | 126.12 | |
| **Bertram Kimball,** . . . . . | 1,185.00 | |
| **Lawrence** Scientific School Loans Repaid, . . | 527.00 | |
| **Munroe,** . . . . . | 522.45 | |
| **Palfrey** Exhibition, . . . . . | 80.00 | |
| **Dr. Andrew P. Peabody** Memorial, . . . . | 179.00 | |
| **Quincy Tufts,** . . . . . | 534.32 | |
| **Stuart Wadsworth Wheeler,** . . . . . | 90.00 | |
| Scholarship and Beneficiary money returned, . . | 1,190.11 | 29,475.87 |
| From Prize Funds and Gifts for Prizes. | | |
| Anonymous gift for a prize essay in the Department of History and Government, . . . . . | $250.00 | |
| **Jeremy Belknap,** . . . . . | 50.00 | |
| **Philo Sherman Bennett,** . . . . . | 40.00 | |
| **Francis Boott.** Expenses, . . . . . | 90.00 | |
| **Bowdoin** Prizes for Dissertations. | | |
| Prizes, . . . . . $1,050.00 | | |
| Expenses, . . . . . 25.00 | 1,075.00 | |
| **Boylston** Prizes for Elocution, . . . . . | 255.00 | |
| **Coolidge** Debating, . . . . . | 200.00 | |
| **Dante** Prize, . . . . . | 100.00 | |
| **Lloyd McKim Garrison** Prize, . . . . . | 100.00 | |
| **Edward Hopkins** Gift for "Deturs," . . . | 289.00 | |
| **John O. Sargent,** . . . . . | 100.00 | |
| **George B. Sohier** (part, see p. 105), . . . . | 250.00 | |
| **Robert N. Toppan,** . . . . . | 150.00 | |
| **Philip Washburn,** . . . . . | 75.00 | |
| **David A. Wells** (part), . . . . . | 560.00 | 3,584.00 |
| Amount carried forward, . . . . . | | $114,025.88 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | | $114,025.88 |
| From Sundry Funds for Special Purposes. | | |
| **Francis Boott**, books for the Department of Music, | $117.67 | |
| **Francis James Child** Memorial, books, | 593.66 | |
| Classical Publication Fund of the **Class of 1856**. | | |
| **Harvard** Studies in Classical Philol., $659.43 | | |
| Interest on advances, 75.28 | 734.71 | |
| Book Fund of the **Class of 1881**, books for the Department of Chemistry, | 68.38 | |
| **George A. Gardner**, photographs, etc., for the Department of Geology, | 261.74 | |
| **George Silsbee** and **Ellen Sever Hale**, Studies in Philology and Literature, | 200.00 | |
| **Harvard** Oriental Series, publications, | 624.65 | |
| **Ingersoll** Lecture (part), printing, | 67.50 | |
| **Francis Greenwood Peabody**, | 2,345.13 | |
| **Nelson Robinson Jr.** (part, see p. 94). | | |
| Expenses of **Nelson Robinson Jr.** Hall, | 4,769.68 | |
| **Nelson Robinson Jr.** Additional. | | |
| Psychological Laboratory. | | |
| Mechanic, $422.98 | | |
| Equipment, 472.51 | | |
| Sundries, 18.51 | 914.00 | |
| **George William Sawin**, books for the Department of Mathematics, | 246.54 | |
| **Robert W. Sayles**, for the Department of Geology, | 5.40 | |
| **John E. Thayer**, Quarterly Journal of Economics, | 780.47 | |
| **Elizabeth Torrey**, books for the Department of History, | 14.70 | |
| **Henry Warren Torrey**, for printing **Harvard** Historical Studies, | 1,000.92 | |
| Unknown Memorial (part), services and expenses, | 2,126.79 | |
| **Cyrus M. Warren**, research in Chemistry, | 283.96 | |
| **David A. Wells** (part), **Harvard** Economic Studies, Vol. II (part), | 698.87 | 15,804.77 |
| From Gifts for Special Purposes. | | |
| For the Chinese Government to apply towards the travelling expenses and support at **Harvard** University of Chinese students in addition to the sixteen sent by the Chinese Government in 1906–07, | $2,493.00 | |
| Amounts carried forward, | $2,493.00 | $129,830.65 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $2,498.00 | $129,880.65 |
| **From** Gifts for Special Purposes (*continued*). | | |
| For Department of Anthropology, . . . . . | 25.00 | |
| " " Architecture, books, casts, etc., | 2,415.28 | |
| " " Chemistry, books and improvements, . . . . . | 1.58 | |
| " " The Classics, books, etc. . . . | 333.51 | |
| " " Economics. | | |
| Books and material, $113.08 | | |
| Maps and charts, . 107.77 | 220.85 | |
| " " French, books, . . . . . | .82 | |
| " " Geology and Geography, lantern slides and models, . . . . | 131.50 | |
| " " German, books, . . . . . | 14.26 | |
| " " Mining and Metallurgy, . . . | 1,223.77 | |
| " " Music, books, . . . . . | 51.70 | |
| " **Harvard** Psychological Studies, publication, | 1,629.48 | |
| " **Lowell** Memorial Library, books, . . . . | 14.04 | |
| " Semitic Library, books, . . . . . | 243.34 | |
| " Bermuda Biological Station, . . . . . | 1,509.29 | |
| " furnishing the Common-Room in Conant Hall, | 491.40 | |
| " extra copies of contributions from the Zoölogical Laboratory, . . . . . | 66.40 | |
| " School for Social Workers, . . . $2,331.00 | | |
| Less charged to College salaries, 1,500.00 | 831.00 | |
| " The Ethics of the Social Questions. | | |
| Sundry expenses, . . . . . | 1,516.66 | |
| For Furnishings for the Department of Social Ethics, in Emerson Hall, . . . . . | 133.87 | |
| " Furnishing Emerson Hall, . . . . . | 3,096.21 | |
| " Philosophical Library. | | |
| Freight on books, . . . . . | 5.00 | |
| " Improvements at the Engineering Camp at Squam Lake, N.H., . . . . . | 157.33 | 16,605.24 |
| **Payments** made from College income on the following accounts: — | | |
| Museum of Comparative Zoölogy (part, see Table XIII, page 123), . . . . . | $4,227.00 | |
| **Jefferson** Physical Laboratory (part, see Table XVIII, page 127), . . . . . | 665.96 | |
| **Hemenway** Gymnasium (part, see Table XXI, page 130), . . . . . | 6,749.90 | 11,642.86 |
| Summer Schools. | | |
| Salaries, . . . . . | $19,395.20 | |
| Secretary, . . . . . | 900.00 | |
| Amounts carried forward, . . . . . | $20,295.20 | $158,078.75 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $20,295.20 | $158,078.75 |
| Summer Schools (*continued*). | | |
| Repairs and improvements, . . . . . | 17.73 | |
| Care and cleaning, . . . . . | 129.37 | |
| Fuel, . . . . . | 13.50 | |
| Water, . . . . . | 17.44 | |
| Lighting, . . . . . | 7.41 | |
| Printing, . . . . . | 579.81 | |
| Stationery and postage, . . . . . | 381.53 | |
| Prospectus and Catalogue, . . . . . | 665.47 | |
| Advertising, . . . . . | 433.47 | |
| Diplomas, . . . . . | 21.00 | |
| Services and wages, . . . . . | 820.15 | |
| Remission of fees for instruction, . . . . . | 200.00 | |
| Geological and Geographical courses, travelling expenses, . . . . . | 28.66 | |
| Receptions, . . . . . | 256.20 | |
| Use of swimming tank, . . . . . | 400.00 | |
| Gymnasium expenses, . . . . . | 88.85 | |
| Instruments and appliances, . . . . . | 7.87 | |
| Deficit for dining-room, . . . . . | 9,849.61 | |
| Supplies, materials, and sundries, . . . . . | 168.97 | 84,382.24 |
| Appropriations for collections, laboratories, etc. | | |
| Anthropology, . . . . . | $100.00 | |
| Architecture, . . . . . | 500.00 | |
| Landscape Architecture, . . . . . | 1,300.00 | |
| Botany, . . . . . | 580.00 | |
| Chemistry, . . . . . | 250.00 | |
| Classics, . . . . . | 400.00 | |
| Economics, . . . . . | 675.00 | |
| Education, . . . . . | 100.00 | |
| Engineering, . . . . . | 2,000.00 | |
| English, . . . . . | 200.00 | |
| Fine Arts, . . . . . | 200.00 | |
| French and Spanish, . . . . . | 1,300.00 | |
| Geology and Geography, . . . . . | 338.54 | |
| German, . . . . . | 925.00 | |
| Graduate Schools, advertising, . . . . . | 2,100.00 | |
| History, . . . . . | 750.00 | |
| History, for books, . . . . . | 188.60 | |
| Mineralogy and Petrography, . . . . . | 350.00 | |
| Mining 12, . . . . . | 100.00 | |
| Music, . . . . . | 125.00 | |
| Physics, . . . . . | 500.00 | |
| Psychology, . . . . . | 150.00 | |
| Amounts carried forward, . . . . | $13,132.14 | $192,460.99 |

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## Table No. II, The College, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $18,182.14 | $192,460.99 |
| Appropriations for collections, laboratories, etc. (*continued*). | | |
| Zoölogy, . . . . . | 200.00 | |
| " for reprints, . . . . . | 50.00 | |
| Assistants to Instructors, . . . . . | 521.00 | |
| Laboratory fees appropriated, . . . . . | 28,036.34 | 41,939.48 |
| Salaries. | | |
| Instruction, . . . . . | $523,572.76 | |
| Deans, . . . . . | 6,333.33 | |
| Chairmen of Committees, . . . . . | 400.00 | |
| Recorders and Secretaries, . . . . . | 7,550.00 | |
| Examination Proctors, . . . . . | 1,450.00 | 539,306.09 |
| For College Public Buildings, which are not valued in the Treasurer's books. | | |
| Repairs, improvements, &c., . . . . . | $4,654.13 | |
| Care and cleaning, . . . . . | 13,704.60 | |
| Fuel, . . . . . | 6,985.83 | |
| Water, . . . . . | 308.28 | |
| Lighting, . . . . . | 1,843.92 | |
| Insurance, . . . . . | 680.37 | |
| Electric power, . . . . . | 513.61 | |
| Supplies and sundries, . . . . . | 337.87 | |
| Telephones, . . . . . | 38.07 | |
| Furniture, . . . . . | 960.21 | 30,026.89 |
| For College Dormitories, Hollis, Stoughton, Holworthy, Thayer, Weld, Wadsworth House, Walter Hastings, Perkins, and Conant, which are not valued in the Treasurer's books. | | |
| Perkins Hall. | | |
| Installation of heating system, . . . . . | $3,638.12 | |
| Other changes, . . . . . | 811.77 | |
| Conant Hall. | | |
| Additions to heating system, . . . . . | 405.60 | |
| Changes in plan, . . . . . | 2,619.57 | |
| Furniture, . . . . . | 5.28 | |
| Repairs and improvements, . . . . . | 8,219.72 | |
| Care and cleaning, . . . . . | 16,427.61 | |
| Fuel, . . . . . | 3,723.12 | |
| Water, . . . . . | 1,427.79 | |
| Lighting, . . . . . | 3,553.82 | |
| Insurance, . . . . . | 930.50 | |
| Supplies and sundries, . . . . . | 387.31 | 42,150.21 |
| General Expenses. | | |
| Deans and Chairmen of Committees, clerical and office expenses, . . . . . | $17,836.60 | |
| Amounts carried forward, . . . . . | $17,836.60 | $845,883.66 |

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## TABLE NO. II, THE COLLEGE, CONTINUED.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $17,886.60 | $845,883.66 |
| General Expenses (*continued*). | | |
| Secretary of the Faculty, clerical and office expenses. | | |
| Alterations to office, . . . . . | $505.10 | |
| Furniture, . . . . . | 405.07 | |
| Assistance, . . . . . | 75.00 | 985.17 |
| Reading examination books, . . . . . | | 3,900.96 |
| Services of proctors, . . . . . | | 1,471.40 |
| " undergraduates, . . . . . | | 1,263.56 |
| " Head Guide in College grounds, . . . | | 375.00 |
| " Librarian in Emerson Hall, . . . . | | 150.00 |
| Attendants in department laboratories, . . . . . | | 2,023.75 |
| Admission examinations, . . . . . | | 2,816.61 |
| Commencement Lunch, . . . . . | | 250.33 |
| Printing office, expenses, . . . . . | $27,695.14 | |
| Less receipts from other Dep'ts, . | 16,392.41 | 11,302.73 |
| Annals of Mathematics, . . . . . | | 1,039.41 |
| Syllabus in Geometry, . . . . . | | 52.62 |
| Infinite Series, . . . . . | | 26.65 |
| Harvard Economic Studies, Vol. II, . . . . . | | 709.05 |
| Syllabus in History 1, . . . . . | | 66.95 |
| Map of Europe, . . . . . | | 106.09 |
| Telephones, . . . . . | | 18.00 |
| Advertising, . . . . . | | 982.45 |
| Watchmen, . . . . . | | 1,460.00 |
| Legal expenses, . . . . . | | 75.00 |
| Music, Class-Day, . . . . . | | 125.00 |
| Receptions, . . . . . | | 73.50 |
| Towards room of visiting German Professor, . . | | 45.00 |
| Landscape Architecture, pamphlet, . . . . . | | 676.56 |
| Forestry, apparatus and supplies, . . . . . | | 165.40 |
| Moving Psychological Laboratory, . . . . . | | ..... |
| Services and expenses at Faculty meetings, . . . | | 151.14 |
| " for Regent, . . . . . | | 7.50 |
| Blank books for examinations, . . . . . | | 942.10 |
| Expenses of Engineering Camp at Squam Lake, . | | 11,945.92 |
| Engineering courses in Pierce Hall, . . . . . | | 8,740.39 |
| Travelling expenses in Economics 18, . . . . . | | 100.00 |
| College Entrance Examination Board, . . . . . | | 131.30 |
| Expense of collecting term-bills, . . . . . | | 147.04 |
| Diplomas, . . . . . | | 849.14 |
| Committee on the Publication of Academic Distinctions, . . . . . | | 43.00 |
| Lighting College Yard, . . . . . | | 182.50 |
| Stereopticon operator, . . . . . | | 9.00 |
| Freight, and sundries, . . . . . | | 94.35 71,341.17 |
| | | $917,224.83 |

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## Table No. III.

## THE LIBRARY.

### RECEIPTS.

| | | |
|---|---|---|
| **Gifts for Capital Account.** | | |
| **Charles Eliot Norton** Fund (additional), . . | $454.92 | |
| **William R. Castle** Fund, . . . . . | 1,000.00 | |
| **Stephen Salisbury** Bequest, . . . . . | 5,120.00 | $6,574.92 |
| **Income of Book Funds, and Gifts and Receipts for the purchase of books.** | | |
| **Nathaniel I. Bowditch,** . . . . . | $105.66 | |
| **Bright** Legacy (½ income, see p. 85), . . . . . | 1,227.50 | |
| **Edwin Conant** (¼ income, see p. 104), . . . . | 339.90 | |
| **Constantius** (¼ income, see p. 104), . . . . . | 635.92 | |
| **Denny,** . . . . . | 263.67 | |
| **Eliza Farrar,** . . . . . | 264.94 | |
| **Price Greenleaf** (part, see pp. 86, 88, 104), . . | 1,000.00 | |
| **Horace A. Haven,** . . . . . | 159.38 | |
| **Francis B. Hayes,** . . . . . | 498.76 | |
| **George Hayward,** . . . . . | 260.08 | |
| **Thomas Hollis,** . . . . . | 119.51 | |
| **Sidney Homer,** . . . . . | 104.49 | |
| **Jarvis,** . . . . . | 25.88 | |
| **Frederick A. Lane,** . . . . . | 266.66 | |
| **Lowell,** . . . . . | 1,389.10 | |
| **Charles Minot,** . . . . . | 2,960.58 | |
| **Charles Eliot Norton,** . . . . . | 439.05 | |
| **Lucy Osgood,** . . . . . | 355.43 | |
| **Mary Osgood,** . . . . . | 345.08 | |
| **Henry L. Pierce,** . . . . . | 2,465.65 | |
| **Francis Sales,** . . . . . | 192.42 | |
| **Stephen Salisbury,** . . . . . | 259.28 | |
| **Sever,** . . . . . | 974.89 | |
| **Samuel Shapleigh,** . . . . . | 196.99 | |
| **George B. Sohier** (part, see p. 89), . . . . . | 93.70 | |
| Subscription, . . . . . | 520.95 | |
| **Charles Sumner,** . . . . . | 1,842.87 | |
| **Kenneth Matheson Taylor,** . . . . . | 248.59 | |
| **Daniel Treadwell** (¼ income, see p. 104), . . . | 300.54 | |
| **Ichabod Tucker,** . . . . . | 200.89 | |
| **Henry W. Wales** (part, see p. 84), . . . . . | 200.02 | |
| **James Walker,** . . . . . | 783.92 | |
| **Thomas W. Ward,** . . . . . | 258.31 | |
| **J. Huntington Wolcott,** . . . . . | 1,007.24 | |
| Gifts for books. Gifts, . . . . . $10,112.68 | | |
| Interest, . . . . . 70.79 | 10,183.47 | |
| Sale of duplicate books, . . . . . | 10.50 | |
| Received for books lost, . . . . . | 87.52 | 30,588.79 |
| Amount carried forward, . . . . . | | $37,113.71 |

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## Table No. III, The Library, continued.

### RECEIPTS.

| | | |
|---|---|---|
| Amount brought forward, | | $37,113.71 |
| Income of **R. M. Hodges** Fund (part, see p. 86). | | |
| For publishing bibliographical contributions, | | 377.24 |
| Income of Funds for general purposes. | | |
| **Daniel Austin**, | $382.32 | |
| **Class of 1880** (part, see pp. 83, 121), | 1,000.00 | |
| **Edwin Conant** (¾ income, see p. 103), | 1,019.68 | |
| **Constantius** (½ income, see p. 103), | 635.92 | |
| Fund of the **Class of 1851**, | 34.62 | |
| " " " " **(C. F. Dunbar's Gift)**, | 34.08 | |
| **Price Greenleaf** (part, see pp. 86, 88, 103), | 16,265.66 | |
| **Henry T. Morgan**, | 4,023.79 | |
| **Henry L. Pierce** (Residuary) (part, see pp. 79, 122), | 2,455.00 | |
| **Stephen Salisbury** Bequest, | 73.31 | |
| **James Savage** (part, see pp. 87, 121), | 1,321.65 | |
| **Daniel Treadwell** (½ income, see p. 103), | 300.54 | |
| **Eben Wright**, | 4,910.00 | 32,456.57 |
| Fees for use of Library, | $90.00 | |
| Fines, | 483.64 | |
| Sale of Bibliographical Contributions, | 3.43 | |
| Gifts for additional service, | 1,815.00 | |
| Gift for special equipment, | 50.00 | 2,442.07 |
| | | $72,389.59 |

### PAYMENTS.

| | | |
|---|---|---|
| For Books, from the following Funds, Gifts, etc. | | |
| **Bowditch**, | $75.95 | |
| **Bright**, | 1,347.94 | |
| **Edwin Conant**, | 266.57 | |
| **Constantius**, | 621.84 | |
| **Denny**, | 252.89 | |
| **Farrar**, | 242.45 | |
| **Price Greenleaf** (part, see pp. 95, 97), | 1,236.79 | |
| **Haven**, | 120.65 | |
| **Hayes**, | 578.43 | |
| **Hayward**, | 159.75 | |
| **Hollis**, | 93.81 | |
| **Homer**, | 70.98 | |
| **Jarvis**, | 37.83 | |
| **Lane**, | 362.48 | |
| **Lowell**, | 921.51 | |
| **Minot**, | 2,682.99 | |
| **Charles Eliot Norton**, | 626.88 | |
| **Lucy Osgood**, | 374.10 | |
| **Mary Osgood**, | 252.38 | |
| Amount carried forward, | $10,326.22 | |

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## Table No. III, The Library, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | | $10,326.22 |
| For Books, from the following Funds, Gifts, etc. (*contin'd*). | | |
| **Henry L. Pierce,** | 1,598.79 | |
| **Sales,** | 199.88 | |
| **Salisbury,** | 387.99 | |
| **Sever,** | 905.79 | |
| **Shapleigh,** | 210.45 | |
| **George B. Sohier** (part, see p. 97), | 174.22 | |
| Subscription, | 585.35 | |
| **Sumner,** | 1,861.77 | |
| **Kenneth Matheson Taylor,** | 143.81 | |
| **Daniel Treadwell,** | 419.48 | |
| **Tucker,** | 211.95 | |
| **Wales,** | 43.79 | |
| **Walker,** | 756.94 | |
| **Ward,** | 213.16 | |
| **J. Huntington Wolcott,** | 1,294.17 | |
| Sundry gifts for books (balances), | 10,537.70 | |
| Duplicate money and receipts for lost books, | 211.22 | |
| Fines, | 64.47 | $30,147.15 |
| Salaries, | $18,900.00 | |
| Services and wages (part, see next line), | 18,358.39 | |
| Services paid from special gifts (part, see below), | 1,400.00 | |
| Repairs and improvements, | 937.96 | |
| Care and cleaning, | 1,048.73 | |
| Fuel, | 1,123.45 | |
| Water, | 64.01 | |
| Lighting, | 1,203.32 | |
| Printing, | 647.03 | |
| Furniture, | 307.19 | |
| Stationery and postage, | 524.09 | |
| Telephone, | 105.00 | |
| Binding, | 3,090.77 | |
| Electric power, | 36.35 | |
| Freight, | 172.77 | |
| Supplies and sundries, | 1,039.46 | |
| Moving books, | 20.00 | 48,978.52 |
| Department Libraries. | | |
| Services and wages. | | |
| Paid from special gifts, $108.00 | | |
| Remainder, 1,122.75 | $1,225.75 | |
| Lighting paid from special gift, | 13.00 | 1,238.75 |
| | | $80,364.42 |

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## Table No. IV.

## DIVINITY SCHOOL.

### RECEIPTS.

| | | | |
|---|---|---|---|
| **Income of Funds for Instruction, or for general purposes.** | | | |
| Divinity School balance (interest on), | | $312.47 | |
| Endowment, | | 3,507.07 | |
| **Oliver Ames,** | | 834.70 | |
| **Hannah C. Andrews,** | | 25.78 | |
| **Daniel Austin,** | | 54.75 | |
| **Adams Ayer,** | | 49.10 | |
| **Joseph Baker,** | | 750.00 | |
| Beneficiary money returned (balance), | | 9.82 | |
| **Bussey** Professorship, | | 1,845.37 | |
| **Bussey** Trust (part, see pp. 108, 117, 131), | | 2,710.28 | |
| **Joshua Clapp,** | | 106.94 | |
| **Edwin Conant,** | | 245.50 | |
| **Dexter** Lectureship, | | 1,254.21 | |
| **Frothingham** Professorship, | | 2,661.37 | |
| **Abraham W. Fuller,** | | 51.56 | |
| **Lewis Gould,** | | 44.73 | |
| **John Hancock** Professorship, | $294.99 | | |
| **Charles L. Hancock** (part, see p. 131), | 3,776.84 | 4,071.83 | |
| **Haven,** | | 245.50 | |
| **Samuel Hoar,** | | 51.56 | |
| **Henry P. Kidder,** | | 491.00 | |
| **Henry Lienow,** | | 450.98 | |
| **Caroline Merriam,** | | 51.56 | |
| **Parkman** Professorship, | | 786.39 | |
| **John W. Quinby,** | | 28.58 | |
| **Abby Crocker Richmond,** | | 49.10 | |
| **John L. Russell,** | | 49.10 | |
| **William B. Spooner,** | | 491.00 | |
| **Thomas Tileston** of New York Endowment, | | 1,964.00 | |
| **Mary P. Townsend,** | | 257.77 | |
| **Winthrop Ward,** | | 103.11 | |
| **Winn** Professorship, | | 2,766.59 | $26,321.72 |
| Interest on account of tuition fees paid in advance, | | | 26.49 |
| **Income of Scholarship, Beneficiary and Prize Funds.** | | | |
| **Robert Charles Billings,** for prizes, | | $125.35 | |
| **Abner W. Buttrick,** | | 656.03 | |
| **Thomas Cary,** | | 281.24 | |
| **George Chapman,** | | 138.81 | |
| **Joshua Clapp,** | | 224.14 | |
| **Jackson** Foundation, | | 743.87 | |
| **J. Henry Kendall,** | | 274.42 | |
| Amounts carried forward, | | $2,443.86 | $26,348.21 |

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## Table No. IV, Divinity School, continued.

### RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . | $2,443.86 | $26,848.21 |
| Income of Scholarship, etc. (*continued*). | | |
| **Nancy Kendall,** . . . . . | 173.52 | |
| **William Pomroy,** . . . . . | 51.56 | 2,668.94 |
| Income of Book Funds. | | |
| **Rushton Dashwood Burr,** . . . . . | $224.58 | |
| **Louisa J. Hall,** . . . . . | 42.13 | 266.71 |
| Receipts from Students. | | |
| Tuition fees, regular courses, . . . . . | $5,500.00 | |
| " " Summer School, . . . . . | 1,545.00 | |
| Divinity Hall, . . . . . | 2,925.00 | |
| Library fines, . . . . . | 7.45 | 9,977.45 |
| Gift for Divinity Library, . . . . . | $4.07 | |
| Gift from Society for Promoting Theological Education, | 1,447.00 | |
| Honoraria returned, . . . . . | 75.00 | |
| Sale of tickets to Alumni Dinner, . . . . . | 52.00 | |
| " catalogues, . . . . . | .75 | |
| " duplicate books, . . . . . | 12.30 | |
| Paid by the College for use of room in Divinity Hall for the visiting German Professor, . . . . . | 45.00 | 1,686.12 |
| | | $40,897.43 |

### PAYMENTS.

| | | |
|---|---|---|
| From Scholarship Funds. | | |
| **Thomas Cary,** . . . . . | $240.00 | |
| **George Chapman,** . . . . . | 100.00 | |
| **Joshua Clapp,** . . . . . | 180.00 | |
| **Jackson Foundation,** . . . . . | 640.00 | |
| **J. Henry Kendall,** . . . . . | 200.00 | |
| **Nancy Kendall,** . . . . . | 140.00 | $1,500.00 |
| From Beneficiary Funds. | | |
| **Abner W. Buttrick,** . . . . . | $575.00 | |
| **William Pomroy,** . . . . . | 49.77 | 624.77 |
| From **Robert Charles Billings** Fund, prize, . . . . . | | 100.00 |
| From Book Funds. | | |
| **Rushton Dashwood Burr,** . . . . . | | 257.97 |
| Salaries for instruction, . . . . . | $27,146.59 | |
| Summer School. Salaries for instruction, . $1,200.00 | | |
| Printing and other expenses, 364.26 | 1,564.26 | |
| Secretary and Librarian, . . . . . | 1,750.00 | |
| Services and wages, . . . . . | 259.77 | |
| Library Assistants, . . . . . | 1,162.30 | |
| Repairs, improvements, and labor, . . . . . | 707.96 | |
| Insurance, . . . . . | 142.01 | |
| Care and cleaning, . . . . . | 1,883.53 | |
| Amounts carried forward, . . . . | $34,616.42 | $2,482.74 |

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## Table No. IV, Divinity School, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $34,616.42 | $2,482.74 |
| Fuel, . . . . . | 498.98 | |
| Water, . . . . . | 47.44 | |
| Lighting, . . . . . | 235.36 | |
| Printing, . . . . . | 220.00 | |
| Furniture, . . . . . | 53.87 | |
| Stationery and postage, . . . . . | 90.01 | |
| Telephone, . . . . . | 20.00 | |
| Books, . . . . . | 389.07 | |
| Binding, . . . . . | 128.50 | |
| Advertising, . . . . . | 355.32 | |
| Diplomas, . . . . . | 11.00 | |
| Alumni dinner, . . . . . | 60.00 | |
| Proportion of expenses of Gymnasium (see Table XXI, page 130), . . . . . | 87.04 | |
| American School for oriental study and research in Palestine (seventh payment), . . . . . | 100.00 | |
| Subscriptions to the Fellowship in Christian Archaeology in the American School of Classical Studies in Rome, | 25.00 | |
| Supplies and sundries, . . . . . | 85.89 | |
| From gift to complete a set of periodicals in the Library, | 4.07 | 37,027.97 |
| | | $39,510.71 |

## Table No. V.

## LAW SCHOOL.

### RECEIPTS.

| | | |
|---|---|---|
| Gift for Capital Account. | | |
| **Samuel Phillips Prescott Fay** 1798 Fund and Scholarship, . . . . . | | $5,000.00 |
| Income of Funds and Gifts. | | |
| Law School balance (interest on), . . . . . | $10,292.15 | |
| **James Barr Ames** Loan, . . . . . | 26.86 | |
| **James Barr Ames** Prize, . . . . . | 103.94 | |
| Gift of **James Munson Barnard** and **Augusta Barnard.** Interest on balance, . . . . . | 40.24 | |
| **Bemis** Professorship, . . . . . | 3,839.72 | |
| **Bussey** Professorship, . . . . . | 1,177.42 | |
| **Bussey** Trust (part, see pp. 106, 117, 131), . . . | 2,710.28 | |
| **James C. Carter** Professorship, . . . . . | 5,045.76 | |
| **James Coolidge Carter** Loan, . . . . . | 591.51 | |
| **Dane** Professorship, . . . . . | 773.32 | |
| **Samuel Phillips Prescott Fay** 1798 Fund and Scholarship, . . . . . | 81.85 | |
| Amounts carried forward, . . . . . | $24,683.05 | $5,000.00 |

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## Table No. V, Law School, continued.

### RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $24,683.05 | $5,000.00 |
| Income of Funds and Gifts (*continued*). | | |
| **George Fisher** Scholarship, . . . . . | 175.04 | |
| **John Foster**, for Medical Students and for Law Students in alternate years, . . . . . | 155.70 | |
| **Hughes** Loan. Interest, . . . . . $37.12 | | |
| Repayments, . . . . . 234.60 | 271.72 | |
| Law School Book, . . . . . | 2,308.73 | |
| Law School Library, . . . . . | 4,910.00 | |
| **Royall** Professorship, . . . . . | 409.54 | |
| **Weld** " . . . . . | 4,664.25 | |
| Scholarship Money Returned. Interest, . . . $24.35 | | |
| Repayments, . 219.00 | 243.35 | |
| Interest on account of tuition fees paid in advance, | 495.36 | |
| Tuition fees, . . . . . | 102,880.00 | |
| Sale of catalogues, . . . . . | 6.50 | 141,203.24 |
| | | $146,203.24 |

### PAYMENTS.

(See also Construction Accounts, Table XXIV, p. 133.)

| | | |
|---|---|---|
| From Funds and Gifts. | | |
| **James Barr Ames** Prize, . . . . . | $410.00 | |
| Gift of **James Munson Barnard** and **Augusta Barnard**, for books, . . . . . | 14.37 | |
| **Hughes** Loan, . . . . . | 551.00 | $975.37 |
| Scholarships from unrestricted income, . . . . . | $5,250.00 | |
| Salaries for instruction, . . . . . | 53,475.00 | |
| Librarians and Assistants, . . . . . | 11,136.91 | |
| Secretary, . . . . . | 675.00 | |
| Services of examiners and proctors, . . . . . | 343.50 | |
| Repairs and improvements, . . . . . | 320.46 | |
| Care and cleaning, . . . . . | 1,665.08 | |
| Fuel, . . . . . | 679.04 | |
| Water, . . . . . | 98.45 | |
| Lighting, . . . . . | 1,416.21 | |
| Printing, . . . . . | 2,839.73 | |
| Furniture, . . . . . | 168.88 | |
| Stationery and postage, . . . . . | 601.96 | |
| Telephone, . . . . . | 77.50 | |
| Books, . . . . . | 14,670.83 | |
| Binding, . . . . . | 2,998.52 | |
| Cleaning and moving books, . . . . . | 32.00 | |
| Advertising, . . . . . | 125.00 | |
| Insurance, . . . . . | 226.17 | |
| Amounts carried forward, . . . . . | $96,800.19 | $975.37 |

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## Table No. V, Law School, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $96,800.19 | $975 37 |
| Freight, . . . . . | 283.58 | |
| Proportion of expenses of Gymnasium (see Table XXI, page 130), . . . . . | 1,667.36 | |
| Travelling expenses, . . . . . | 308.45 | |
| Electric power, . . . . . | 116.71 | |
| Diplomas, . . . . . | 96.80 | |
| Sundries, . . . . . | 378.84 | 99,651.93 |
| | | $100,627.30 |

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## Table No. VI.

## MEDICAL SCHOOL.

### RECEIPTS.

(See also Construction Accounts, Table XXIV, page 132.)

| | | |
|---|---|---|
| Gifts for Capital. | | |
| **Harvard** Medical Alumni Fund, . . . . . | $2,480.00 | |
| **F. B. Greenough** Fund (additional), . . . . . | 500.00 | |
| **John Homans** Memorial Fund, . . . . . | 50,000.00 | |
| **Walter Augustus Lecompte** Professorship of Otology Fund, . . . . . | 50,000.00 | |
| **Lyman Nichols** Fund, . . . . . | 10,000.00 | |
| **Edward Wigglesworth** Professorship of Dermatology Fund, . . . . . | 50,000.00 | |
| **James Skillen** Memorial Fund, . . . . . | 10,857.39 | |
| **James Jackson Cabot** Fund, . . . . . | 6,000,00 | $179,787.39 |
| Fund established. | | |
| **Henry Francis Sears** Fund for Pathology established by vote of the Corporation, March 11, 1907, with part of the proceeds from the sale of the Medical School property at the corner of Boylston and Exeter Streets, by which the laboratory erected in 1889 with the gift of $35,000 from **Henry Francis Sears**, and known as the **Sears** Pathological Laboratory, passed from the possession of the University, | | 35,000.00 |
| Income of Funds for Instruction, or for general purposes. | | |
| **Harvard** Medical Alumni, . . . . . | $79.54 | |
| Anonymous Fund in the Department of Theory and Practice, . . . . . | 493.90 | |
| **Edward M. Barringer** (part, see p. 111), . . | 752.69 | |
| Amounts carried forward, . . . . | $1,326.13 | $214,787.39 |

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TABLE NO. VI, MEDICAL SCHOOL, CONTINUED.

RECEIPTS.

| | | |
|---|---|---|
| Amounts brought forward, | $1,326.13 | $214,787.39 |
| Income of Funds for Instruction (*continued*). | | |
| **Robert C. Billings,** | 5,868.19 | |
| **John B.** and **Buckminster Brown,** | 1,101.71 | |
| **Bullard** Professorship of Neuropathology, | 2,498.65 | |
| **Calvin** and **Lucy Ellis** (part, see p. 131), | 17,495.17 | |
| **George Fabyan** Foundation for Comparative Pathology (part, see p. 112), | 6,478.18 | |
| **Samuel E. Fitz,** | 90.15 | |
| **Henry Harris** (½ income, see p. 79), | 735.00 | |
| **Hersey** Professorship (⅔ income, see p. 83), | 397.06 | |
| **George Higginson,** | 5,046.35 | |
| **John Homans** Memorial, | 1,738.97 | |
| **Henry Jackson** Endowment, | 4,719.88 | |
| **Jackson** Professorship of Clinical Medicine, | 3,397.38 | |
| **Walter Augustus Lecompte** Professorship of Otology, | 306.87 | |
| **William O. Moseley,** | 2,604.31 | |
| New subscription, | 1,902.60 | |
| **Lyman Nichols,** | 20.18 | |
| **Henry L. Pierce** (Residuary), | 20,960.50 | |
| **Dr. Ruppaner,** | 458.40 | |
| **Henry Francis Sears** Fund for Pathology, | 1,217.29 | |
| **George C. Shattuck,** | 3,629.44 | |
| **James Stillman** Professorship, | 5,661.18 | |
| **Mary W. Swett,** | 774.06 | |
| **Samuel W. Swett,** | 982.00 | |
| **Quincy Tufts,** | 98.20 | |
| **Edward Wigglesworth** Professorship of Dermatology, | 1,329.78 | |
| **Henry Willard Williams,** | 1,922.51 | 92,760.14 |
| Interest on account of tuition fees paid in advance, | | 278.97 |
| Income of Fellowship Funds; Gift for Fellowship. | | |
| Anonymous Gift, | $600.00 | |
| **Edward Austin** (part, see pp. 85², 88, 116). | | |
| **Austin** Teaching Fellowships, | 2,000.00 | |
| **George Cheyne Shattuck** Memorial, | 267.40 | |
| **Charles Eliot Ware** " | 285.42 | |
| **John Ware** " | 264.99 | 3,417.81 |
| Income of Scholarship and Aid Funds. | | |
| Anonymous Aid, | $254.19 | |
| **Edward M. Barringer** (part, see p. 110), | 500.00 | |
| **Lucius F. Billings,** | 257.82 | |
| **James Jackson Cabot,** | 245.50 | |
| Amounts carried forward, | $1,257.51 | $311,244.31 |

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## Table No. VI, Medical School, continued.

### RECEIPTS.

| | | |
|---|---|---|
| Amount brought forward, | $1,257.51 | $311,244.81 |
| Income of Scholarship and Aid Funds (*continued*). | | |
| **David Williams Cheever,** | 286.79 | |
| **Cotting** Gift, | 157.96 | |
| **Orlando W. Doe,** | 144.11 | |
| **Joseph Eveleth** (part, see p. 86), | 600.00 | |
| **Lewis** and **Harriet Hayden,** | 280.46 | |
| **William Hilton** (part, see p. 86), | 450.00 | |
| **Claudius M. Jones,** | 321.56 | |
| **Alfred Hosmer Linder,** | 270.74 | |
| **Joseph Pearson Oliver,** | 430.51 | |
| **Charles B. Porter,** | 282.91 | |
| **Charles Pratt Strong,** | 246.43 | |
| **Isaac Sweetser,** | 323.08 | |
| **John Thomson Taylor,** | 265.93 | |
| **Edward Wigglesworth,** | 271.82 | 5,589.81 |
| Income of Prize Funds. | | |
| **Ward Nicholas Boylston,** | $194.63 | |
| **William H. Thorndike,** | 385.09 | 579.72 |
| Income of Sundry Funds and Gifts for special purposes. | | |
| **Edward Austin** (Bacteriological Laboratory), | $568.28 | |
| **J. Ingersoll Bowditch,** | 306.48 | |
| **Boylston,** for Medical Books, | 72.57 | |
| **Caroline Brewer Croft** (part, see p. 131), | 2,419.29 | |
| **George Fabyan** Foundation for Comparative Pathology, interest (part, see p. 111), $3,627.78 | | |
| Returned from appropriation, | 80.00 | 3,707.78 |
| **F. B. Greenough** (surgical research), | 201.16 | |
| Medical Library, | 99.48 | |
| **Proctor,** for the study of Chronic Diseases. | | |
| Interest, $2,761.63 | | |
| Returned from appropriation, | 456.95 | 3,218.58 |
| School of Comparative Medicine, | 262.29 | |
| Surgical Laboratory, | 338.25 | |
| **Warren** Fund for Anatomical Museum. | | |
| Interest, $670.27 | | |
| Insurance premiums returned, | 35.28 | 705.55 |
| Gifts for present use, | 163.01 | 12,062.72 |
| Sale of malene by the Department of Pathology, | $92.00 | |
| Gifts for present use, | 16,300.32 | |
| For heat and power supplied to the House of the Good Samaritan, | 2,347.22 | |
| From instructors for advertising summer courses, | 360.00 | 19,099.54 |
| Amount carried forward, | | $343,576.10 |

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## Table No. VI, Medical School, continued.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $348,576.10 |
| Receipts from students. | | | |
| Tuition fees, regular courses, | $55,798.07 | | |
| " " graduate courses, | 2,141.00 | | |
| " " Dental students, | 3,075.00 | | |
| " " summer courses, | 7,698.05 | $68,712.12 | |
| Graduation fees, | | 300.00 | |
| Matriculation fees, | | 460.00 | |
| Examination fees, | | 96.00 | |
| Laboratory fees and supplies. | | | |
| Anatomy, | $1,563.10 | | |
| Chemistry, | 932.25 | | |
| Pathological Technique, | 105.08 | | |
| Physiology, | 374.52 | | |
| Operative Surgery, | 195.00 | | |
| Surgical Technique, | 186.00 | 3,355.95 | 72,924.07 |
| Repayments. | | | |
| Appropriations (balances), | | $517.60 | |
| Expenses for a personal object, | | 50.00 | 567.60 |
| | | | $422,067.77 |

### PAYMENTS.

(See also Construction Accounts, Table XXIV, page 133.)

| | | |
|---|---|---|
| From Fellowship Funds and Gift. | | |
| Anonymous Gift, | $600.00 | |
| **Edward Austin** (part, see pp. 94[2], 97, 116). | | |
| **Austin** Teaching Fellowship, | 2,000.00 | |
| **George Cheyne Shattuck** Memorial, | 225.00 | |
| **Charles Eliot Ware** Memorial, | 225.00 | |
| **John Ware** Memorial, | 225.00 | $3,275.00 |
| From Scholarship and Aid Funds. | | |
| Anonymous Aid, | $200.00 | |
| **Edward M. Barringer** (part), | 500.00 | |
| **Lucius F. Billings,** | 200.00 | |
| **David Williams Cheever,** | 250.00 | |
| **Cotting** Gift, | 125.00 | |
| **Orlando W. Doe,** | 140.00 | |
| **Joseph Eveleth** (part, see p. 95), | 600.00 | |
| **John Foster,** | 100.00 | |
| **Lewis** and **Harriet Hayden,** | 272.50 | |
| **William Hilton** (part), | 450.00 | |
| **Claudius M. Jones,** | 250.00 | |
| **Alfred Hosmer Linder,** | 200.00 | |
| Amounts carried forward, | $3,287.50 | $3,275.00 |

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TABLE No. VI, MEDICAL SCHOOL, CONTINUED.

PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, | $3,287.50 | $3,275.00 |
| For Scholarship and Aid Funds (*continued*). | | |
| **Joseph Pearson Oliver,** | 325.00 | |
| **Charles B. Porter,** | 225.00 | |
| **Charles Pratt Strong,** | 100.00 | |
| **Isaac Sweetser,** | 250.00 | |
| **John Thomson Taylor,** | 200.00 | |
| **Edward Wigglesworth,** | 200.00 | 4,587.50 |
| From Prize Fund. | | |
| **Boylston,** advertising, | | 12.50 |
| From Sundry Funds and Gifts for special purposes. | | |
| **Edward Austin** (Bacteriological Laboratory), | $667.88 | |
| **Robert C. Billings,** Journal of Medical Research, | 800.00 | |
| **J. Ingersoll Bowditch,** Physiology, | 114.89 | |
| **Boylston,** Medical Books, | 17.46 | |
| **Bullard** Professorship of Neuropathology, | 1,235.60 | |
| **Caroline Brewer Croft** (part), cancer investigations, | 929.05 | |
| **George Fabyan** Foundation for Comparative Pathology (part), services, | 3,627.78 | |
| Gifts for Anatomical Research, | 202.37 | |
| Gifts for Pathological Department Library, | 404.93 | |
| **Proctor,** for the study of Chronic Diseases, | 3,185.15 | |
| Surgical Laboratory, | 1,431.03 | |
| **Warren** Fund for Anatomical Museum, | 1,965.12 | |
| Sundry Gifts (balances), $8,752.29 | | |
| Less paid for salaries, 4,750.00 | 4,002.29 | 18,583.55 |
| Appropriations. | | |
| Anatomy, | $1,980.00 | |
| Comparative Anatomy, | 1,527.10 | |
| Bacteriology, | 600.00 | |
| Books and service for the library, | 3,500.00 | |
| Chemistry, | 1,232.25 | |
| Histology and Embryology, | 750.00 | |
| Hygiene, | 700.00 | |
| Boston Medical Library, for use of, | 100.00 | |
| Clinical Medicine, | 50.00 | |
| Obstetrics, | 50.00 | |
| Pathology, | 1,200.00 | |
| Pharmacology and Therapeutics, | 700.00 | |
| Physiology, | 2,594.52 | |
| Comparative Physiology, | 500.00 | |
| Surgery, | 586.00 | |
| Theory and Practice, | 700.00 | 16,769.87 |
| Amount carried forward, | | $43,228.42 |

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## Table No. VI, Medical School, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | | $43,228.42 |
| Graduate courses, fees repaid to Instructors, | $2,141.00 | |
| Summer " " " " | 8,793.00 | 10,934.00 |
| Salaries for instruction, | | 91,691.66 |
| Retiring allowance, | | 1,000.00 |
| General Expenses. | | |
| Dean and Secretary, | $500.00 | |
| Clerical services, | 1,370.13 | |
| Repairs and improvements, | 1,210.07 | |
| Care and cleaning, in new buildings, | 14,619.85 | |
| " " old " (part of year), | 590.70 | |
| Fuel, | 11,586.58 | |
| Water, in new buildings, | 722.57 | |
| " old " (part of year), | 403.20 | |
| Lighting and gas, in new buildings, | 275.82 | |
| " " old " (part of year), | 306.40 | |
| Printing, | 717.53 | |
| Furniture, | 18.01 | |
| Stationery and postage, | 393.14 | |
| Telephones, in new buildings, | 1,240.28 | |
| " old " (part of year), | 106.32 | |
| Advertising and catalogues, | 1,491.59 | |
| Insurance, | 25.00 | |
| Proctors, | 67.00 | |
| Mechanics and laboratory attendants, | 9,496.41 | |
| Watchman, | 1,415.54 | |
| Diplomas, | 105.89 | |
| Moving to new buildings, | 4,503.40 | |
| Dedication of new buildings, | 278.55 | |
| Repairing portraits, | 132.50 | |
| Washing towels, | 701.49 | |
| Supplies and material, | 1,690.22 | |
| Sundries, | 181.03 | |
| Interest on advances, | 277.67 | 54,426.89 |
| | | $201,280.97 |

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## Table No. VII.

## DENTAL SCHOOL.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Income of Funds and Gifts. | | | |
| **Edward Austin** (part, see pp. 85[2], 88, 111). | | | |
| **Austin** Teaching Fellowship, | | $500.00 | |
| Dental School balance (interest on), | | 636.14 | |
| Dental School Endowment, | | 111.36 | |
| **Henry C. Warren** Endowment, | | 1,129.80 | |
| Gifts for building and for endowment. | | | |
| **Harvard** Dental Alumni Gifts, | $1,430.50 | | |
| Other Gifts, | 3,009.00 | | |
| Interest, | 852.42 | 5,291.92 | $7,668.72 |
| Interest on tuition fees paid in advance, | | | 51.06 |
| Receipts from students. | | | |
| Tuition fees, regular courses, | $10,640.00 | | |
| " " special " | 300.00 | | |
| " " summer " | 437.50 | | |
| | $11,377.50 | | |
| Less transferred to Medical School, | 3,075.00 | $8,302.50 | |
| Examination fees, | | 27.00 | |
| Laboratory fees, | | 3,505.72 | |
| Use of microscopes, | | 51.00 | |
| Chemistry, breakage and supplies, | | 267.32 | 12,153.54 |
| Fees from infirmary, | | | 4,809.25 |
| Sale of gold, platinum, and sweepings, | | $401.02 | |
| " scraps and old materials, | | 61.94 | 462.96 |
| Receipts from real estate, | | | 681.17 |
| | | | $25,826.70 |

### PAYMENTS.

| | | | |
|---|---|---|---|
| **Edward Austin** (part, see pp. 94[2], 97, 113). | | | |
| **Austin** Teaching Fellowship, | | | $500.00 |
| Real Estate. Expenses, | | | 522.41 |
| Salaries for instruction, | | $5,437.50 | |
| Secretary, | | 700.00 | |
| Proctors, | | 32.00 | |
| Repairs and improvements, | | 1,008.62 | |
| Care and cleaning, | | 1,147.58 | |
| Fuel, | | 394.40 | |
| Water, | | 114.30 | |
| Lighting, | | 363.27 | |
| Printing, | | 210.60 | |
| Furniture, | | 76.30 | |
| Instruments and apparatus, | | 77.13 | |
| Amounts carried forward, | | $9,561.70 | $1,022.41 |

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## Table No. VII, Dental School, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, | $9,561.70 | $1,022.41 |
| Stationery and postage, | 316.89 | |
| Telephone, | 121.37 | |
| Advertising, | 477.22 | |
| Services and wages, | 2,064.61 | |
| Services of an assistant in Chemistry, | 65.00 | |
| Annual Catalogue, | 132.45 | |
| Expenses in preparing for a new building, | 25.00 | |
| Hospitality, | 110.00 | |
| Laboratory expenses, | 77.44 | |
| Clinical expenses, | 28.50 | |
| Washing towels, | 345.81 | |
| Supplies, &c., | 4,691.48 | |
| Sundries, | 98.58 | 18,116.05 |
| | | $19,138.46 |

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## Table No. VIII.

## BUSSEY INSTITUTION.

### RECEIPTS.

| | | |
|---|---|---|
| Income of Funds. | | |
| **Bussey** Institution balance (interest on), | $1,415.36 | |
| **Bussey** Trust (part, see pp. 106, 108, 131), | 5,420.55 | $6,835.91 |
| Tuition fees, | | 4,875.00 |
| Interest on tuition fees paid in advance, | | 21.06 |
| Sale of wood, hay and sundries, | $104.42 | |
| Horticultural Department, prizes, sale of flowers, plants, &c., | 1,757.51 | |
| Board of animals, | 5,491.26 | |
| Use of houses by College officers, | 1,335.00 | 8,688.19 |
| | | $20,420.16 |

### PAYMENTS.

| | | |
|---|---|---|
| Salaries, | $8,400.00 | |
| Services and wages, | 3,468.07 | |
| Repairs and improvements, | 1,238.87 | |
| Fuel, | 386.25 | |
| Lighting, | 3.04 | |
| Water, | 38.20 | |
| Printing, | 36.50 | |
| Stationery and postage, | 12.52 | |
| Books, | 62.76 | |
| Catalogue, | 12.80 | |
| Advertising, | 71.52 | |
| Horticultural Department, expenses, | 2,202.78 | |
| Grain, farming tools, &c., | 2,448.48 | |
| Amount carried forward, | $18,381.79 | |

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TABLE NO. VIII, BUSSEY INSTITUTION, CONTINUED.

PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | $18,381.79 | |
| Diplomas, | 4.25 | |
| Furniture, | 55.78 | |
| Insurance, | 58.75 | |
| Sundries, | 15.00 | $18,515.57 |

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TABLE NO. IX.

## ARNOLD ARBORETUM.

RECEIPTS.

| | | | |
|---|---|---|---|
| Gift for capital account. | | | |
| **Arnold** Arboretum Fund (additional), | | | $745.00 |
| Income of Funds and of Gifts. | | | |
| **Arnold** Arboretum balance (interest on), | | $6,191.71 | |
| **James Arnold**, | | 7,898.57 | |
| **Robert Charles Billings** (part), | | 667.35 | |
| **William L. Bradley.** | | | |
| Income, | $1,128.91 | | |
| Gift, | 600.00 | 1,728.91 | |
| **Francis Skinner**, | | 982.00 | |
| **Bussey**, for the **Arnold** Arboretum, | | 113.32 | |
| Gifts for construction (interest on balance), | | 592.91 | |
| Gift for books (interest on balance), | | 6.51 | 18,181.28 |
| Gifts for botanical exploration in Western China. | | | |
| Gifts, | | $17,680.42 | |
| Interest, | | 89.32 | 17,769.74 |
| Gift for books, | | $2,500.00 | |
| Gifts for other present uses, | | 2,625.00 | |
| " real estate and construction, | | 300.00 | |
| Use of barn, | | 120.00 | |
| Sale of grass and materials, | | 1,834.25 | 7,379.25 |
| | | | $44,075.27 |

PAYMENTS.

| | | |
|---|---|---|
| From **William L. Bradley** Fund, bibliography, | | $1,736.82 |
| Botanical exploration in Western China, from gifts, | | 6,702.95 |
| Books from gifts, | | 48.80 |
| Salaries of Director and Assistants, | $4,950.00 | |
| Repairs and improvements, | 543.69 | |
| Labor, | 10,116.87 | |
| Fuel, | 409.42 | |
| Water, | 61.00 | |
| Furniture, | 477.36 | |
| Amounts carried forward, | $16,558.34 | $8,488.57 |

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## Table No. IX, Arnold Arboretum, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, | $16,558.34 | $8,488.57 |
| Stationery and postage, | 329.07 | |
| Printing, | 1.90 | |
| Services and wages, | 6,214.50 | |
| Supplies, tools, and materials, | 1,335.65 | |
| Taxes, | 318.00 | |
| Freight, | 237.00 | |
| Expenses of expeditions for collecting, | 315.67 | |
| Sundries, | 5.15 | 25,315.28 |
| | | $33,803.85 |

## Table No. X.

## BOTANIC GARDEN AND BOTANICAL MUSEUM.

### RECEIPTS.

| | | |
|---|---|---|
| **Gift for Capital Account.** | | |
| Centennial Fund, | | $850.00 |
| **Income of Funds.** | | |
| Botanic Department (⅝ income, see p. 90), | $1,220.75 | |
| Centennial Fund, | 10.21 | |
| **Lowell,** for a Botanic Garden, | 3,260.59 | |
| **John L. Russell** (¼ income, see p. 120), | 24.55 | 4,516.10 |
| **Gifts.** | | |
| For cases. Interest, | $15.88 | |
| For sugar-cane investigations. Interest, | 24.92 | |
| For immediate use, | 5,177.90 | 5,218.70 |
| Laboratory fees in Botany 1, less expenses, | | 374.63 |
| Sale of botanical material, | | 500.00 |
| Use of house, | | 700.00 |
| | | $12,159.43 |

### PAYMENTS.

| | | |
|---|---|---|
| From gift for cases, | | $497.13 |
| " for sugar-cane investigations, | | 531.35 |
| Services and wages, | $655.22 | |
| Labor, | 4,911.50 | |
| Repairs and improvements, | 338.96 | |
| Fuel, | 773.06 | |
| Water, | 134.55 | |
| Furniture, | 23.95 | |
| Stationery and postage, | 4.50 | |
| Telephone, | 38.45 | |
| Printing, | 4.45 | |
| Binding, | 8.65 | |
| Amounts carried forward, | $6,893.29 | $1,028.48 |

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TABLE No. X, BOTANIC GARDEN AND BOTANICAL MUSEUM, CONTINUED.

PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, | $6,893.29 | $1,028.48 |
| Taxes, | 167.40 | |
| Electric power, | .57 | |
| Interest on advances, | 449.54 | |
| Supplies and sundries, | 790.22 | |
| Freight, | 79.14 | |
| Expenses of collecting plants, | 15.25 | |
| **Ware** Collection of glass models of flowers, expenses, | 242.30 | |
| Cases bought with general income, | 992.53 | 9,630.24 |
| | | $10,658.72 |

## TABLE No. XI.

## GRAY HERBARIUM.

RECEIPTS.

| | | |
|---|---|---|
| Gift for Capital Account. | | |
| **Sarah E. Potter** Endowment Fund, | | $50,165.00 |
| Income of Funds. | | |
| **Gray** Herbarium balance (interest on), | $85.19 | |
| **Robert Charles Billings,** | 736.50 | |
| **Asa Gray** Memorial, | 1,601.20 | |
| Herbarium, | 1,014.21 | |
| **Sarah E. Potter** Endowment, | 204.55 | |
| **John L. Russell** (⅓ income, see p. 119), | 73.65 | 3,715.30 |
| **Asa Gray's** copyrights, | | 814.29 |
| Gifts for immediate use, | | 3,223.44 |
| Sale of publications, | $40.72 | |
| " contributions, | 6.60 | |
| " card index, | 2,220.12 | |
| " duplicate book, | 12.00 | 2,279.44 |
| | | $60,197.47 |

PAYMENTS.

| | | |
|---|---|---|
| Salaries, | $4,450.00 | |
| Services and wages, | 3,270.56 | |
| Care and cleaning, | 191.72 | |
| Repairs and improvements, | 18.58 | |
| Furniture, | 50.00 | |
| Stationery and postage, | 84.80 | |
| Telephone, | 45.52 | |
| Printing, | 575.58 | |
| Books, | 1,371.77 | |
| Binding, | 124.65 | |
| Advertising, | 4.00 | |
| Supplies and sundries, | 1,301.52 | $11,488.70 |

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## Table No. XII.

# OBSERVATORY.

### RECEIPTS.

| | | |
|---|---|---|
| **Income of Funds and Gift.** | | |
| Advancement of Astronomical Science (1902). | | |
| Interest (part, see p. 131), | $775.57 | |
| **Thomas G. Appleton,** | 245.50 | |
| **J. Ingersoll Bowditch,** | 122.75 | |
| **Uriah A. Boyden,** | 9,538.36 | |
| **Class of 1880** (part, see pp. 83, 104), | 500.00 | |
| **Charlotte Harris,** | 98.20 | |
| **Haven,** | 2,209.50 | |
| **James Hayward,** | 1,031.10 | |
| Observatory Endowment, | 2,455.00 | |
| **Paine** Professorship, | 2,455.00 | |
| **Robert Treat Paine,** | 13,450.06 | |
| **Edward B. Phillips,** | 5,415.43 | |
| **Josiah Quincy,** | 726.43 | |
| **James Savage** (¼ net income, see pp. 87, 104), | 440.55 | |
| **David Sears,** | 1,970.78 | |
| **Augustus Story,** | 656.96 | $42,091.19 |
| Anonymous gift for special use, | $2,500.00 | |
| Interest, | 86.96 | 2,586.96 |
| **Mrs. Henry Draper,** gift for special research (additional), | $10,000.00 | |
| Interest, | 111.60 | 10,111.60 |
| Gifts for present use, | | 10,000.00 |
| Use of house by College officer, | $600.00 | |
| Sale of Annals, | 41.09 | |
| " photographs, | 13.50 | |
| " slides, | 15.50 | |
| " grass, | 20.00 | 690.09 |
| Award of insurance for loss by fire, | | 112.00 |
| | | $65,591.84 |

### PAYMENTS.

| | | |
|---|---|---|
| From Advancement of Astronomical Science Fund (1902) (part, see p. 131), | | $300.00 |
| " **Uriah A. Boyden Fund,** supplies, apparatus, services, &c., | | 12,833.45 |
| " **Draper** Memorial, supplies, apparatus, services, &c., | $10,827.44 | |
| Less amount included in salaries, | 3,000.00 | 7,827.44 |
| Salaries, | $18,000.00 | |
| Services and wages, | 7,774.32 | |
| Repairs and improvements, | 2,261.42 | |
| Care and cleaning, | 573.63 | |
| Labor, | 1,510.88 | |
| Amounts carried forward, | $30,120.25 | $20,960.89 |

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## Table No. XII, Observatory, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amounts brought forward, | $30,120.25 | $20,960.89 |
| Fuel, | 428.87 | |
| Water, | 69.03 | |
| Lighting, | 190.44 | |
| Printing, | 3,218.32 | |
| Furniture, | 179.10 | |
| Instruments and apparatus, | 2,301.76 | |
| Stationery, postage, and telegraphing, | 722.64 | |
| Telephone, | 84.33 | |
| Books, | 427.82 | |
| Binding, | 425.59 | |
| Insurance, | 67.04 | |
| Freight, | 275.82 | |
| Use of house, | 90.00 | |
| Electric power, | 96.09 | |
| Interest on advances, | 273.33 | |
| Supplies and materials, | 909.24 | |
| Sundries, | 45.90 | 39,925.57 |
| | | $60,886.46 |

## Table No. XIII.

## MUSEUM OF COMPARATIVE ZOÖLOGY.

### RECEIPTS.

| | | |
|---|---|---|
| Income of Funds. | | |
| Museum of Comparative Zoölogy balance (int. on), | $1,753.61 | |
| **Agassiz** Memorial, | 14,628.51 | |
| **Teachers and Pupils,** | 372.87 | |
| **Virginia Barret Gibbs** Scholarship, | 273.39 | |
| **Gray** Fund for Zoölogical Museum, | 2,455.00 | |
| **Sturgis Hooper,** | 5,292.64 | |
| **Humboldt,** | 380.08 | |
| **Willard Peele Hunnewell,** | 245.50 | |
| Permanent Fund for Museum of Zoölogy, | 5,767.73 | |
| **Henry L. Pierce** (Residuary), (part, see pp. 79, 104), | 4,910.00 | $36,079.33 |
| Use of lecture rooms by Radcliffe College, | | 700.00 |
| | | $36,779.33 |

### PAYMENTS.

| | | |
|---|---|---|
| From **Sturgis Hooper** Fund. | | |
| Salary of **Sturgis Hooper** Professor, | $5,000.00 | |
| Expenses, | 140.00 | $5,140.00 |
| Salaries, | $11,100.00 | |
| Services and wages, | 3,907.80 | |
| Repairs and improvements, | 1,455.55 | |
| Care and cleaning, | 3,430.60 | |
| Amounts carried forward, | $19,893.95 | $5,140.00 |

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TABLE No. XIII, MUSEUM OF COMPARATIVE ZOÖLOGY, CONTINUED.

PAYMENTS.

| | | | |
|---|---|---|---|
| Amounts brought forward, | | $19,893.95 | $5,140.00 |
| Fuel, | | 2,711.64 | |
| Water, | | 60.96 | |
| Gas, | | 9.27 | |
| Printing, | | 1,982.89 | |
| Cases, | | 6,061.09 | |
| Stationery and postage, | | 77.90 | |
| Telephone, | | 40.00 | |
| Books, | | 1,699.92 | |
| Binding, | | 606.62 | |
| Watchmen, | | 949.45 | |
| Collections, | | 3,149.33 | |
| Freight, | | 329.80 | |
| Travelling expenses, | | 163.00 | |
| Supplies and sundries, | | 1,344.87 | |
| | | $39,080.69 | |
| Less the following items which were paid from College income (see Table II, page 99) : — | | | |
| Heating and service, | $3,437.00 | | |
| Librarian's salary (part), | 250.00 | | |
| Watchman (part), | 240.00 | | |
| Publishing contributions from the Laboratories of Geography and Zoölogy, | 300.00 | 4,227.00 | 34,853.69 |
| | | | $39,993.69 |

TABLE No. XIV.

## PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY.

RECEIPTS.

| | | | |
|---|---|---|---|
| Income of Funds. | | | |
| **Hemenway** Fellowship, | | $614.19 | |
| **Peabody** Building, | | 1,449.31 | |
| **Peabody** Collection, | | 2,419.33 | |
| **Peabody** Professor, | | 2,419,33 | |
| **Thaw** Fellowship, | | 1,172.66 | |
| **Henry C. Warren** Exploration, | | 511.28 | |
| **Susan Cornelia Warren**, | | 245.50 | |
| **Robert C. Winthrop** Scholarship, | | 284.88 | |
| **Huntington Frothingham Wolcott**, | | 1,017.65 | $10,134.13 |
| Use of heating plant, | | | 75.00 |
| Gifts. | | | |
| For South American expedition. Gifts, | $5,299.92 | | |
| Interest, | 31.23 | $5,331.15 | |
| For other present uses, | | 1,110.00 | 6,441.15 |
| Library fines and for lost books, | | | 1.60 |
| Total of receipts, carried forward, | | | $16,651.88 |

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## Table No. XIV, Peabody Museum, continued.

| | | |
|---|---|---|
| Total of receipts, brought forward, | | $16,651.88 |
| **PAYMENTS.** | | |
| From **Henry C. Warren** Fund, explorations, | | $506.00 |
| " **Huntington Frothingham Wolcott** Fund, specimens, | | 881.07 |
| " Gifts for South American Expedition, | | 5,639.10 |
| **Hemenway** Fellowship, | | 200.00 |
| **Thaw** Fellowship, | | 1,164.47 |
| **Robert C. Winthrop** Scholarship, | | 225.00 |
| Salary of Professor and Curator, | $2,371.54 | |
| Services and wages, | 3,352.80 | |
| Repairs and improvements, | 160.66 | |
| *Care and cleaning, | 1,150.90 | |
| *Fuel, | 187.20 | |
| Water, | 3.60 | |
| *Lighting, | 12.85 | |
| Printing, | 697.87 | |
| Furniture, | 450.24 | |
| Stationery and postage, | 239.29 | |
| Telephone, | 31.00 | |
| Books, | 84.24 | |
| Binding, | 10.90 | |
| Explorations, | 470.00 | |
| Freight, | 197.81 | |
| Supplies, | 134.33 | |
| Sundries, | 29.13 | |
| Interest on advances, | 95.30 | |
| | $9,679.66 | |
| Less the items marked *, which were paid from University income (see Table I, page 81), | 1,350.95 | 8,328.71 |
| | | $16,894.35 |

## Table No. XV.

## SEMITIC MUSEUM.

### RECEIPTS.

| | | |
|---|---|---|
| Gifts for Semitic Collection. | | |
| Gifts, | $10,000.00 | |
| Interest, | 637.90 | $10,637.90 |
| Gift for excavations in Palestine. Interest, | | 40.63 |
| | | $10,678.53 |

### PAYMENTS.

| | | |
|---|---|---|
| From gift for excavations in Palestine, | $2,575.00 | |
| From gifts for Semitic Collection, | 4,618.29 | $7,193.29 |
| Amount carried forward, | | $7,193.29 |

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## Table No. XV, Semitic Museum, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | | $7,193.29 |
| General expenses. | | |
| Curator, | $500.00 | |
| Repairs and improvements, | 25.42 | |
| Care and cleaning, | 624.19 | |
| Fuel, | 163.95 | |
| Water, | 17.96 | |
| Lighting, | 4.90 | |
| Furniture, | 39.77 | |
| Electric power, | 40.41 | |
| Stationery and postage, | 7.20 | |
| Supplies and sundries, | 1.20 | |
| Use of Peabody Museum heating plant, | 75.00 | |
| These general expenses were paid from University income (see Table I, page 81), | $1,500.00 | |
| | | $7,193.29 |

## Table No. XVI.

## GERMANIC MUSEUM.

### RECEIPTS.

| | | |
|---|---|---|
| Gifts for Capital Account. | | |
| Emperor William Fund (additional), | | $6,970.00 |
| Income of Funds and Gifts. | | |
| Emperor William, | $1,133.52 | |
| Unrestricted gift. Interest, | 5.22 | 1,138.74 |
| | | $8,108.74 |

### PAYMENTS.

| | | |
|---|---|---|
| From unrestricted gift, | | $101.40 |
| General expenses. | | |
| Repairs and improvements, | $200.42 | |
| Care and cleaning, | 382.04 | |
| Fuel, | 97.27 | |
| Water, | 5.00 | |
| Lighting, | 54.88 | |
| Insurance, | 9.97 | |
| Electric power, | 50.93 | |
| Sunday and Thursday opening of Museum, | 190.26 | |
| Hand-book, | 203.89 | |
| Supplies and sundries, | 14.18 | |
| | $1,208.84 | |
| Less the amount which was paid from University income (see Table I, page 81), | 75.32 | 1,133.52 |
| | | $1,234.92 |

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## Table No. XVII.

## WILLIAM HAYES FOGG ART MUSEUM.

### RECEIPTS.

| | | |
|---|---|---|
| **Income of Funds.** | | |
| **William Hayes Fogg,** | $2,455.00 | |
| **Gray** Fund for Engravings, | 813.78 | |
| **William M. Prichard,** | 875.55 | |
| **John Witt Randall,** | 1,699.89 | |
| **Mary R. Searle,** | 96.38 | |
| Sale of photographs and catalogue, | 25.30 | |
| For work in connection with photographs sold, | 102.13 | $6,068.03 |
| Gift for the purchase of drawings by Turner, | | 1,000.00 |
| | | $7,068.03 |

### PAYMENTS.

| | | |
|---|---|---|
| From gift, seventeen drawings by Turner, | | $1,000.00 |
| From the following Funds: — | | |
| **Gray** Fund for Engravings. | | |
| Curator, | $250.00 | |
| Collections, | 356.10 | |
| Expenses, | 146.94 | 753.04 |
| **William M. Prichard,** collections, | | 348.83 |
| **John Witt Randall.** | | |
| Curator, | $250.00 | |
| Collections, | 36.42 | |
| Expenses, | 853.06 | 1,139.48 |
| **Mary R. Searle,** books, | | 86.96 |
| **William Hayes Fogg** Fund and Art Museum balance. | | |
| Director, | $500.00 | |
| Services and wages, | 1,521.66 | |
| *Care and cleaning, | 1,589.90 | |
| Repairs and improvements, | 124.87 | |
| *Fuel, | 1,105.42 | |
| *Water, | 61.72 | |
| *Lighting, | 125.27 | |
| Furniture, | 183.62 | |
| Printing, | 9.00 | |
| *Telephone, | 18.00 | |
| Work on collections, | 9.40 | |
| *Electric power, | 26.77 | |
| Interest on advances, | 4.68 | |
| Supplies and sundries, | 29.65 | |
| | $5,309.96 | |
| Less the items marked *, which were paid from University income (see Table I, page 81), | 2,927.08 | 2,382.88 |
| | | $5,711.19 |

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## Table No. XVIII.

## JEFFERSON PHYSICAL LABORATORY.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Income of Funds. | | | |
| **Jefferson** Physical Laboratory balance (interest on), | | $95.01 | |
| Physical Laboratory Endowment, | | 3,682.50 | |
| **Joseph Lovering.** | | | |
| Income, | $393.93 | | |
| Gift, | 100.00 | 493.93 | $4,271.44 |
| **T. Jefferson Coolidge,** for Research in Physics. | | | |
| Loans to be used in place of income. | | | |
| Loan, | | $4,250.00 | |
| Interest, | | 69.33 | 4,319.33 |
| Anonymous Gift for Physical Research. | | | |
| Gift, | | $1,381.95 | |
| Interest, | | 12.12 | 1,394.07 |
| | | | $9,984.84 |

### PAYMENTS.

| | | | |
|---|---|---|---|
| Research in Physics, from | | | |
| **T. Jefferson Coolidge** Fund, | | $3,203.19 | |
| **Joseph Lovering** Fund, | | 167.58 | $3,370.77 |
| Loan repaid, with interest, from | | | |
| **T. Jefferson Coolidge** Fund, | | | 1,381.95 |
| Instruments and apparatus, | | $452.32 | |
| Printing, | | 4.25 | |
| Binding, | | 266.13 | |
| Repairs, | | 65.96 | |
| Care and cleaning, | | 1,036.04 | |
| Fuel, | | 415.00 | |
| Water, | | 35.84 | |
| Lighting, | | 270.60 | |
| Telephone, | | 61.00 | |
| Stationery and postage, | | 89.91 | |
| Insurance, | | 132.45 | |
| Services and wages, | | 1,348.00 | |
| Electric power, | | 296.49 | |
| Furniture, | | 24.00 | |
| Supplies and sundries, | | 13.25 | |
| | | $4,511.24 | |
| Less the following, paid from College income (see Table II, page 99) : — | | | |
| Repairs, | $65.96 | | |
| Fuel, services, etc., | 600.00 | 665.96 | 3,845.28 |
| | | | $8,598.00 |

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## Table No. XIX.

## APPLETON CHAPEL.

### RECEIPTS.

| | | |
|---|---|---|
| **Income of Funds.** | | |
| Fund for Religious Services, | $50.77 | |
| **Increase Sumner Wheeler,** | 2,455.00 | $2,505.77 |

### PAYMENTS.

| | | |
|---|---|---|
| Preaching and morning services, | $3,218.80 | |
| Administrator, | 200.00 | |
| Organist and Choir-master, | 2,000.00 | |
| Choir, | 1,600.00 | |
| Repairs and improvements, | 112.80 | |
| Care and cleaning, | 364.84 | |
| Fuel, | 395.45 | |
| Water, | 2.58 | |
| Lighting, | 263.60 | |
| Furniture, | 135.53 | |
| Music, | 336.32 | |
| Binding, | 38.61 | |
| Electric power, | 30.27 | |
| Repairing and tuning organ, | 129.98 | |
| Sundries, | 38.21 | |
| | $8,866.99 | |
| Less the amount which was paid from University income (see Table I, page 81), | 6,361.22 | $2,505.77 |

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## Table No. XX.

## PHILLIPS BROOKS HOUSE.

### RECEIPTS.

| | | |
|---|---|---|
| **Income of Funds.** | | |
| **Phillips Brooks** House Endowment, | $515.90 | |
| **John W. and Belinda L. Randall,** | 283.65 | |
| **Ralph H. Shepard,** | 556.98 | |
| **Ralph Hamilton Shepard** Memorial, | 338.25 | |
| Gift for present use, | 25.00 | $1,719.78 |

### PAYMENTS.

| | | |
|---|---|---|
| From **John W. and Belinda L. Randall** Fund. | | |
| Social Service Committee, | | $100.00 |
| Secretary of **Phillips Brooks** House Association, | $600.00 | |
| Repairs, | 57.69 | |
| Care and cleaning, | 1,154.77 | |
| Fuel, | 444.56 | |
| Water, | 50.78 | |
| Lighting, | 119.88 | |
| Amounts carried forward, | $2,427.68 | $100.00 |

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## Table No. XX, Phillips Brooks House, continued.

### PAYMENTS.

| | | | |
|---|---|---|---|
| Amounts brought forward, | | $3,427.63 | $100.00 |
| Furniture, | | 13.32 | |
| Books, | | 17.88 | |
| Insurance, | | 71.81 | |
| Receptions, | | 474.34 | |
| Publications, | | 200.00 | |
| Printing annual report, | | 90.25 | |
| Rent of piano, | | 40.00 | |
| Repairing desk of Phillips Brooks, | | 58.42 | |
| Social Service Investigation, | | 200.00 | |
| Supplies and sundries, | | 150.90 | |
| | | $3,744.55 | |
| Less the following items, which were paid from University income (see Table I, page 81) : — | | | |
| Repairs and improvements, | $57.69 | | |
| Care and cleaning, | 1,054.77 | | |
| Fuel, | 444.56 | | |
| Furniture, | 13.32 | | |
| Water, | 50.73 | | |
| Lighting, | 119.88 | | |
| Insurance, | 71.81 | | |
| Supplies and sundries, | 44.26 | 1,857.02 | 1,887.53 |
| | | | $1,987.53 |

## Table No. XXI.

## HEMENWAY GYMNASIUM.

### RECEIPTS.

| | | |
|---|---|---|
| Fees for the use of | | |
| Lockers, by students, | $2,418.00 | |
| Gymnasium, by graduates, | 20.00 | |
| Gymnasium, by members of the Episcopal Theological School, | 78.38 | $2,516.38 |

### PAYMENTS.

| | |
|---|---|
| Salaries, | $5,000.00 |
| Services and wages, | 976.01 |
| Repairs and improvements, | 238.20 |
| Care and cleaning, | 2,516.99 |
| Fuel, | 757.61 |
| Apparatus, | 350.00 |
| Insurance, | 179.52 |
| Water, | 221.45 |
| Lighting, | 553.15 |
| Photographs, | 50.00 |
| Amount carried forward, | $10,842.93 |

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## Table No. XXI, Hemenway Gymnasium, continued.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Amount brought forward, | | $10,842.93 | |
| Printing, | | 71.87 | |
| Stationery and postage, | | 33.77 | |
| Telephone, | | 40.00 | |
| Supplies and sundries, | | 32.11 | |
| | | $11,020.68 | |
| Less the following items: — | | | |
| Charged to Divinity School (see Table IV, page 108), | $87.04 | | |
| Charged to Law School (see Table V, page 110), | 1,667.36 | | |
| Charged to The College (see Table II, page 99), | 6,749.90 | 8,504.30 | $2,516.38 |

## Table No. XXII.

## STILLMAN INFIRMARY.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Income of Funds and of Gifts. | | | |
| **Stillman** Infirmary balance (interest on), | | $53.86 | |
| **Robert Charles Billings,** for **Stillman** Infirmary, | | 2,697.90 | |
| Free Bed Fund of the **Class of 1868,** | | 287.53 | |
| " " for the **Stillman** Infirmary, | | 29.12 | |
| **Herbert Schurz** Memorial Free Bed Fund, | | 161.88 | |
| **Stillman** Infirmary Gift. Interest on balance, | | 315.71 | |
| **Henry P. Walcott,** | | 142.73 | |
| **Samuel Ward,** | | 334.80 | $4,523.53 |
| Receipts from Students. | | | |
| Infirmary annual fees, | | $14,308.00 | |
| Receipts from patients, | | 4,682.52 | 18,990.52 |
| | | | $23,514.05 |

### PAYMENTS.

| | | |
|---|---|---|
| Services and wages, | $5,440.81 | |
| Janitors and cleaning, | 3,182.19 | |
| Repairs and improvements, | 391.60 | |
| Fuel, | 2,111.30 | |
| Water, | 254.76 | |
| Lighting, | 493.81 | |
| Furniture, | 214.25 | |
| Stationery and postage, | 35.45 | |
| Telephone, | 174.96 | |
| Printing, | 9.90 | |
| Electric power, | 9.61 | |
| Food and supplies, | 6,250.46 | |
| Sundries, | 113.98 | $18,683.08 |

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## Table No. XXIII.

## SUNDRY FUNDS FOR SPECIAL PURPOSES.

### RECEIPTS.

| | |
|---|---|
| **Gift for Capital Account.** | |
| **George Smith** Bequest (additional), | $1,981.02 |
| **Income of Funds, Gifts, &c.** | |
| Advancement of Astronomical Science (1901), | 2,455.00 |
| " " " " (1902) (part, see p. 121), | 775.56 |
| **Bussey Trust** (part, see pp. 106, 108, 117), | 4,000.00 |
| **Class of 1834,** | 68.67 |
| **Class of 1844,** | 366.16 |
| " **1846,** | 559.10 |
| " **1853,** | 149.00 |
| " **1856,** | 385.68 |
| **Caroline Brewer Croft** (part, see p. 112), | 2,180.99 |
| **Calvin and Lucy Ellis** (part, see p. 111), | 125.24 |
| **George H. Emerson** Scholarship (part, see p. 86), | 84.35 |
| Gospel Church (½ income, see p. 83), | 170.65 |
| **Gurney** (part, see p. 83), | 1,000.00 |
| **Charles L. Hancock** (part, see p. 106), | 33.32 |
| **Harvard** Memorial Society, | 71.34 |
| **Henry S. Nourse** (part, see p. 79), | 1,020.00 |
| **Robert Troup Paine** (accumulating), | 1,667.62 |
| Professorship of Hygiene (part, see p. 84), | 3,666.82 |
| **James Skillen** Memorial, | 278.25 |
| **George Smith** Bequest (part, see p. 132), | 900.00 |
| **Alexander W. Thayer** (part, see p. 89), | 480.00 |
| **Charles Wilder,** | 1,964.00 |
| **Daniel Williams,** | 818.30 |
| **Sarah Winslow,** | 235.34 |
| Woodland Hill. Use of laboratory, | 1,000.00 |
| | $26,431.41 |

### PAYMENTS.

| | |
|---|---|
| **From the following Funds and Gifts.** | |
| Advancement of Astronomical Science (1901), annuity, | $2,370.00 |
| " " " " (1902) (part), annuity, | 648.66 |
| **Bussey Trust** (part), annuities, | 4,000.00 |
| **Class of 1853,** Secretary of the Class, | 149.00 |
| " **1856,** " " " | 355.50 |
| **Caroline Brewer Croft** (part), annuity, | 2,180.99 |
| **Calvin and Lucy Ellis** (part), taxes and expenses, | 125.24 |
| **George H. Emerson** Scholarship (part, see p. 95), taxes, | 84.35 |
| Gifts for Cuban Teachers, expenses, | 52.00 |
| **Gurney** (part), annuities, | 1,000.00 |
| **Charles L. Hancock** (part), taxes on Chelsea real estate, | 33.32 |
| Amount carried forward, | $10,999.06 |

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TABLE No. XXIII, SUNDRY FUNDS FOR SPECIAL PURPOSES, CONT'D.

PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | | $10,999.06 |
| **Henry S. Nourse** (part). Annuity, | $1,000.00 | |
| Legal and other expenses, | 20.00 | 1,020.00 |
| Professorship of Hygiene (part), annuity, | | 3,666.82 |
| **James Skillen** Memorial, annuity, | | 300.00 |
| **George Smith** Bequest. Annuities, | | 900.00 |
| **Alexander W. Thayer,** annuity, | | 480.00 |
| **Charles Wilder,** annuities, | | 1,896.00 |
| **Daniel Williams.** | | |
| Treasurer of Mashpee Indians, | $527.28 | |
| " " Herring Pond Indians, | 273.15 | 800.43 |
| **Sarah Winslow.** | | |
| Teacher at Tyngsborough, Mass., | $110.94 | |
| Minister " " " | 110.94 | |
| Commission on income, credited to University, | 5.88 | 227.76 |
| Woodland Hill. | | |
| Taxes, | $1,074.84 | |
| Legal expenses, | 130.00 | |
| Interest on advances, | 127.18 | 1,332.02 |
| | | $21,622.09 |

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TABLE No. XXIV.

## CONSTRUCTION ACCOUNTS.

RECEIPTS.

| | | |
|---|---|---|
| Gifts for a new University Library Building. | | |
| Interest on balance, | $1,609.99 | |
| Gifts towards the addition to Gore Hall, | 15,000.00 | $16,609.99 |
| **George Smith** Bequest (accumulating) (part, see p. 131), | | 14,076.72 |
| Medical School Undertaking. | | |
| Sale of property at the corner of Boylston and Exeter Streets, | $500,423.80 | |
| Premiums for insurance on this property repaid, | 724.12 | |
| Interest on proceeds of sale, | 16,192.89 | |
| | $517,340.81 | |
| Sales of land adjoining new buildings, | 309,058.14 | |
| Net income of real estate, | 494.26 | |
| **John D. Rockefeller** Gift. Interest on balance, | 57,808.33 | |
| Gift for Pathological Laboratory. Interest, | 273.68 | 884,975.22 |
| Gifts for Improvements and Additions to The Soldier's Field, | | 20,000.00 |
| | | $935,661.93 |

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## TABLE No. XXIV, CONSTRUCTION ACCOUNTS, CONTINUED.

### PAYMENTS.

| | | | |
|---|---|---|---|
| Antitoxin Laboratory, construction. | | | |
| Building, | | $403.95 | |
| Interest on advances, | | .94 | $404.89 |
| From gifts towards the addition to **Gore** Hall, construction, | | | 14,681.62 |
| **Langdell** Hall (for the Law Library), construction, | | | 246,417.40 |
| Medical School Undertaking. | | | |
| From Gifts for Pathological Laboratory, | | $63.35 | |
| Real Estate. | | | |
| Removing loam, | $124.66 | | |
| Legal services, | 40.00 | | |
| Surveys and plans, | 9.00 | | |
| Interest on advances, | 14,606.81 | 14,780.47 | |
| Construction. | | | |
| Buildings, | $150,826.20 | | |
| Interest on advances, | 43,280.20 | 194,106.40 | 208,950.22 |
| Gifts for Improvements and Additions to The Soldier's Field. | | | |
| Stadium. Interest on advances, | | | 2,353.81 |
| | | | $472,757.94 |

## TABLE No. XXV.

## SUNDRY ACCOUNTS.

### RECEIPTS.

| | | | |
|---|---|---|---|
| Bursar's Sundry Accounts, | | | $493,373.50 |
| Advances from General Investments to | | | |
| Antitoxin Laboratory, | | $404.89 | |
| **Uriah A. Boyden** Fund, | | 3,295.09 | |
| Classical Publication Fund of the **Class of 1856**, | | 245.24 | |
| Dante Prize, | | 50.00 | |
| **Price Greenleaf** Income for Books, | | 97.04 | |
| **Sales** Book Fund, | | 5.53 | |
| German Department Library, | | 14.26 | |
| **Harvard** Psychological Review, | | 514.46 | |
| Medical School, | | 819.64 | |
| **Peabody** Museum of American Archaeology and Ethnology, | | 656.43 | 6,102.58 |
| Gains and Losses for General Investments. Gain on sales. | | | |
| $100,000 Schenectady 1st M. 4½'s of 1941, | | $518.32 | |
| 50,000 American Tel. & Tel. Co. 5% Gold Coupon Notes of 1907, paid at par, | | 3,468.75 | 3,987.07 |
| Gains from changes of Special Investments. | | | |
| **Henry S. Nourse** Fund. | | | |
| 25 shares Brookside Mills, | | | 118.75 |
| Amount carried forward, | | | $503,581.90 |

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## Table No. XXV, Sundry Accounts, continued.

### RECEIPTS.

| | | |
|---|---|---|
| Amount brought forward, | | $503,581.90 |
| Income Account. | | |
| Balance remaining after dividing the net income among the Funds, as stated on page 5, | | 1,099.17 |
| Transfer to | | |
| Anonymous Gift for Observatory, from Advancement of Astronomical Science Fund (1902), | | 1,588.08 |
| Transfers to the Medical School Undertaking, to meet the excess in costs over gifts and other credits. | | |
| **Collis P. Huntington** Laboratory, from | | |
| Interest on Gift of **John D. Rockefeller,** | $160,056.65 | |
| **Junius Spencer Morgan** Memorial Halls, from | | |
| Sale of property on Boylston and Exeter Streets, | 279,825.78 | |
| **Henry L. Pierce** (Residuary) Fund, . . | 1,347.33 | |
| Power House (total cost), from | | |
| **Henry L. Pierce** (Residuary) Fund, . . | 278,052.56 | |
| **David Sears** Building, from | | |
| Interest on Gift of **John D. Rockefeller,** | 75,110.60 | |
| Sale of property on Boylston and Exeter Streets, | 30,990.07 | |
| Animal House, mains, tunnels and sundries, from | | |
| **Henry L. Pierce** (Residuary) Fund, . . | 85,637.29 | |
| Sale of property on Boylston and Exeter Streets, | 65,629.30 | |
| Real Estate, from | | |
| Sale of property on Boylston and Exeter Streets, | 106,176.66 | 1,082,826.24 |
| Sundry balances, | | 2,796.64 |
| | | $1,591,892.03 |

### PAYMENTS.

| | | |
|---|---|---|
| Bursar's Sundry Accounts, | | $499,495.89 |
| Advances from General Investments, repaid by | | |
| Anonymous Gift for Observatory, | $1,588.08 | |
| Book Fund of the **Class of 1881,** | 20.25 | |
| **Edwin Conant** Book Fund, | 10.00 | |
| **Lloyd McKim Garrison** Fund, | 17.48 | |
| **R. M. Hodges** Fund, | 247.56 | |
| **Sever** Book Fund, | 68.60 | |
| Botanic Department, | 1,638.39 | |
| **Emerson** Hall, cost in excess of gifts, paid from unrestricted principal, | 3,368.81 | |
| **William Hayes Fogg** Art Museum, | 93.68 | |
| Medical School Real Estate, | 106.69 | |
| " " Undertaking, | 1,183,526.43 | |
| Observatory, | 4,441.96 | |
| Gifts for Improvements and Additions to The Soldier's Field on account of the Stadium, | 17,646.19 | 1,212,774.12 |
| Amount carried forward, | | $1,712,270.01 |

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## Table No. XXV, Sundry Accounts, continued.

### PAYMENTS.

| | | |
|---|---|---|
| Amount brought forward, | | $1,712,270.01 |
| Gains and Losses for General Investments. | | |
| Loss on sale. | | |
| $150,000 Mortgage note on property on Boylston and Exeter Streets, | | 1,600.00 |
| Loss from change of Special Investment. | | |
| **Daniel A. Buckley** Fund. | | |
| Deferred charge on sale of real estate in Cambridge, | | 5.00 |
| To reimburse the Committee in charge of the **Shaler** Memorial gifts, for their expenses in that Committee, | | 760.23 |
| Transfers from | | |
| Advancement of Astronomical Science Fund (1902) | | |
| To Anonymous Gift for Observatory, | | 1,588.08 |
| **Henry L. Pierce** (Residuary) Fund (an unrestricted bequest), | $365,037.18 | |
| Interest on Gift of **John D. Rockefeller,** | 235,167.25 | |
| Sale of property on Boylston and Exeter Streets, | 482,621.81 | |
| To Medical School Undertaking, | | 1,082,826.24 |
| Sale of property on Boylston and Exeter Streets, | | |
| To **Henry Francis Sears** Fund for Pathology, | | 35,000.00 |
| | | $2,834,049.56 |

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## BALANCED SUMMARY OF THE TABLES.

| Table. | | Receipts. | Payments. |
|---|---|---|---|
| I. | University, | $81,916.11 | $143,165.48 |
| II. | College, | 1,319,893.76 | 917,224.83 |
| III. | Library, | 72,389.59 | 80,364.42 |
| IV. | Divinity School, | 40,897.43 | 39,510.71 |
| V. | Law School, | 146,203.24 | 100,627.30 |
| VI. | Medical School, | 422,067.77 | 201,280.97 |
| VII. | Dental School, | 25,826.70 | 19,138.46 |
| VIII. | **Bussey** Institution, | 20,420.16 | 18,515.57 |
| IX. | **Arnold** Arboretum, | 44,075.27 | 33,803.85 |
| X. | Botanic Garden and Botanical Museum, | 12,159.43 | 10,658.72 |
| XI. | **Gray** Herbarium, | 60,197.47 | 11,488.70 |
| XII. | Observatory, | 65,591.84 | 60,886.46 |
| XIII. | Museum of Comparative Zoölogy, | 36,779.33 | 39,998.69 |
| XIV. | **Peabody** Museum of American Archaeology and Ethnology, | 16,651.88 | 16,894.35 |
| XV. | Semitic Museum, | 10,678.53 | 7,193.29 |
| XVI. | Germanic Museum, | 8,108.74 | 1,234.92 |
| XVII. | **William Hayes Fogg** Art Museum, | 7,068.03 | 5,711.19 |
| XVIII. | **Jefferson** Physical Laboratory, | 9,984.84 | 8,598.00 |
| XIX. | **Appleton** Chapel, | 2,505.77 | 2,505.77 |
| XX. | **Phillips Brooks** House, | 1,719.78 | 1,987.58 |
| XXI. | **Hemenway** Gymnasium, | 2,516.38 | 2,516.38 |
| XXII. | **Stillman** Infirmary, | 23,514.05 | 18,683.08 |
| XXIII. | Sundry Funds for Special Purposes, | 26,431.41 | 21,622.09 |
| XXIV. | Construction Accounts, | 985,661.93 | 472,757.94 |
| XXV. | Sundry Accounts, | 1,591,892.03 | 2,884,049.56 |
| | | $4,985,151.47 | $5,070,413.26 |

| | | |
|---|---|---|
| Total amount of payments, | | $5,070,413.26 |
| Total amount of receipts, | $4,985,151.47 | |
| Less gifts for capital account, | 548,423.99 | 4,436,727.48 |
| Balance, which is the net decrease of Funds and balances, excluding gifts for capital, as is shown also on page 7, | | $633,685.78 |

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*Certificate of the Committees of the Corporation and Overseers of Harvard College, for examining the Accounts of the Treasurer.*

The committees appointed by the Corporation and Overseers of Harvard College to examine the accounts of the Treasurer for the year ending July 31, 1907, have, with the assistance of an expert chosen by them, examined and audited the Cash-book and Journal covering the period from August 1, 1906, to July 31, 1907, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were on hand at the beginning of said year, or have been received by him during said year, are now in his possession, or are fully accounted for by entries made therein; they have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

They have in like manner satisfied themselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them as are not supported by counter entries being proved by regular vouchers and receipts.

They have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and the balances carried forward correctly to new accounts.

(Signed)

ARTHUR T. CABOT, *Committee on the part of the Corporation.*

STEPHEN M. WELD,
WILLIAM ENDICOTT, Jr.
WILLIAM C. ENDICOTT,
GORDON ABBOTT,
GRAFTON St.L. ABBOTT,
ALLAN FORBES,
RICHARD C. STOREY,
JOHN L. SALTONSTALL.
*Committee on the part of the Board of Overseers.*

Boston, January, 1908.

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# INDEX

Titles which appear in the table of Funds and Balances, beginning on page 62, are in full face type.

Figures in *italics* represent payments; in regular Roman type, receipts.

Two or more entries on a page are indicated by a small figure at the right of the page number: $20^2$ indicates three entries of receipts on page 20.

Abbreviations are used as follows:—

| | | | |
|---|---|---|---|
| *A.*, | Arnold Arboretum; | *M.*, | Medical School; |
| *B.*, | Book Funds; | *M.S.U.*, | Medical School Undertaking; |
| *Be.*, | Beneficiary and Loan Funds; | *O.*, | Observatory; |
| *C.*, | College; | *P.*, | Professorship Funds; |
| *D.*, | Divinity School; | *Pr.*, | Prize Funds; |
| *F.*, | Fellowship Funds; | *S.*, | Scholarship Funds; |
| *L.*, | Law School; | *U.*, | University. |


**Abbot** (*S.*), 66, 85, *94*.
**Abbot, J. W. P.**, 63, 84.
**Advancement of Astronomical Science** (1901), *43*, 75, 131, *131*.
**Advancement of Astronomical Science** (1902), *43*, 59, 75, 121, *121*, 131, *131*, 134, *135*.
**Advances from General Investments**, 133, *134*.
**Agassiz Memorial**, 72, 122.
**Alford** (*P.*), 63, 83.
**Alford** (*S.*), 66, 85.
**Ames, J. B.** (Loan), 71, 108.
**Ames, J. B.** (*Pr.*), 59, 71, 108, *109*.
**Ames, O.**, 70, 106.
**Ames, R. C.** (*Be.*), 68, 88, *96*.
**Anatomical Research**, 74, *114*.
**Andrews, H. C.**, 70, 106.
**Annuities**, *43*, *131*, *132*.
**Anonymous** (*F.*), 31, 74, 111, *113*.
**Anonymous** (*O.*), 121, *134*, *135*.
**Anonymous** (*Pr.*), 69, *97*.
**Anonymous** (*S.*), $24^4$, 68, 88.
**Anonymous Aid** (*Be.*), $24^2$, 75, 89, 111, *113*.
**Anthropology**, 90, *99*.
**Antitoxin Laboratory**, *45*, 133, *133*.
**Appleton Chapel**, *41*, *81*, 136.
Tables, 15, 128, *128*.
**Appleton, J. A.** (*F.*), 65, 85, *94*.
**Appleton, N.** (*Be.*), 68, 88.
**Appleton, T. G.**, 75, 121.
**Appropriations**, *35*, *100*, *101*, *114*.
**Arboretum Construction**, $32^2$, 76, 118.
**Architecture**, 65, 90, *99*.
**Architectural League** (*S.*), *96*.
**Arnold Arboretum**, $17^5$, 46, 76, $118^2$.
**Arnold Arboretum**, $32^2$, 33, *37*, 136.
**China, Expedition to**, $33^{13}$, 76, 118, *118*.
Funds, 76.
Tables, 12, 118, *118*.
**Arnold Arboretum, Books**, 33, 76.
**Arnold, J.**, 76, 118.
**Austin, D.** (*C.*), 63, 104.
**Austin, D.** (*D.*), 70, 106, 116, *116*.
**Austin, E.**, 77, $85^4$, $88^2$, $94^2$, *97*, 111, *113*.
**Austin, E.** (Bacteriological Laboratory), 73, 112, *114*.
**Austin, E.**, Loans Rep'd (*Be.*), 72, 88, *97*.
**Ayer, A.**, 70, 106.

**Bacteriological Laboratory**, 73, 112, *114*.
**Baker, J.**, 70, 106.
Balance (Remainder) of Income, General Investments, 5, 134.
**Baldwin, W. H. Jr.** (*U.*), 62, 79.
**Baldwin, W. H. Jr. 1885**, 63, 90.
**Band Music**, 62, 79.
**Barnard, J. M. and A.** (*L.*), 71, 108, *109*.
**Barringer, E. M.**, 73, 110, 111, *113*.
**Barringer, J. B.**, 72, 83.
**Bartlett** (*S.*), 66, 85, *94*.
**Bassett** (*S.*), 66, 85, *94*.
**Belknap, J.** (*Pr.*), 24, 89, *97*.
**Bemis** (*P.*), 71, 108.
**Beneficiary and Loan Funds**, 68.
Receipts, 88, 89, 106.
Payments, *35*, *96*, *97*, *107*.


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**Beneficiary Money Returned** (*D.*), 70, 106.
**Bennett, J. G.** (*Pr.*), 69, 89.
**Bennett, P. S.** (*Pr.*), 69, 89, *97*.
**Bermuda Biological Station**, 23, 65, 91, *99*.
**Bigelow** (*S.*), 66, 85, *94*.
**Bigelow, A.**, 62, 79.
**Billings, L. F.** (*S.*), 75, 111, *113*.
**Billings, R. C.** (*A.*), 60, 76, 118.
**Billings, R. C.** (Gray Herbarium), 63, 120.
**Billings, R. C.** (*M.S.*), 73, 111, *114*.
**Billings, R. C.** (*Pr.*), 71, 106, *107*.
**Billings, R. C.** (Stillman Infirmary), 76, 130.
**Biological Chemistry**, $31^{5}$, 74.
**Blake, S.**, 62, 79.
**Blanchard, C. F.**, 62, 79.
**Blanchard, J. A.**, 63, 84.
**Bolles, F.**, Memorial (*Be.*), 68, 88, *97*.
**Bond Gifts** (*O.*), $80^{3}$, 75.
**Book Fund of the Class of 1881**, 69.
**Books Lost**, 108, *105*, 123.
**Boott, F.** (*Pr.*), 69, 89, 90, *97*, *98*.
**Borden** (*S.*), 66, 85.
**Boston Newsboys'** (*S.*), $19^{2}$, 24, 46, 67, 83, 87, *96*.
**Botanic Department**, 63, 90, 119, *134*.
**Botanic Garden**, Cases, 65, 119, *119*.
**Botanic Garden Centennial**, $17^{9}$, 46, 63, $119^{2}$.
**Botanic Garden and Botanical Museum**, $28^{7}$, *37*, 63, 64, 136.
Tables, 12, 119, *119*.
**Bowditch** (*S.*), 66, 85, *94*.
**Bowditch, J. I.** (*M.*), 73, 112, *114*.
**Bowditch, J. I.** (*O.*), 75, 121.
**Bowditch, N. I.** (*B.*), 69, 103, *104*.
**Bowdoin** (*Pr.*), 69, 89, *97*.
**Boyden, U. A.**, 75, 121, *121*, 133.
**Boylston** (*P.*), 63, 83.
**Boylston**, Elocution (*Pr.*), 69, 89, *97*.
**Boylston, W. N.** (*M.*, *B.*), 73, 112, *114*.
**Boylston, W. N.** (*M.*, *Pr.*), 75, 112, *114*.
**Bradford, S. D.**, 62, 79.
**Bradley, W. L.**, 22, 76, 118, *118*.
**Brattle, W.** (*Be.*), 68, 88.
**Bright** (*B.*), 69, 103, *104*.
**Bright** (*S.*), 66, 85, *94*.
**Bright Legacy**, 77, 85, 103, *104*.
**Brighton Marsh Fence**, 77.
**Brimmer**, 17, 46, 62, $83^{2}$.
**Brooks House, Phillips**, 76, 128.
**Brooks House, Phillips**, *41*, *81*, 136.
Funds, 76.
Tables, 16, 128, *128*.
**Brown, J. B. and B.**, 73, 111.
**Browne** (*S.*), 66, 85, *94*.
**Buckley, D. A.** (*Be.*), 49, 58, 68, 88, *135*.
**Buckminster, M. W.** (*S.*), 66, 85, *94*.
**Building, Gifts for** (Dental School), $83^{77}$, 75, 116.
**Bullard Professorship of Neuropathology**, 73, 111, *114*.
**Burr** (*S.*), 66, 85, *94*.
**Burr, R. D.** (*B.*), 70, 107, *107*.
**Bursar's Sundry Accounts**, 50, *51*, 77, 133, *134*.
**Bussey** (*A.*), 76, 118.
**Bussey** (*P.*, *D.*), 70, 106.
**Bussey, B.** (*P.*, *L.*), 71, 108.
**Bussey, B., Trust**, *43*, 48, 60, 77, 106, 108, 117, 131, *131*.
**Bussey Institution**, 76, 117.
**Bussey Institution**, *37*, 136.
Funds, 76.
Tables, 11, 117, *117*.
**Buttrick, A. W.** (*Be.*), 71, 106, *107*.

**Cabot, J. J.** (*S.*), 18, 46, 75, 110, 111.
**Cabot, W. C.**, 68, 88, *97*.
**Carnegie Foundation for the Advancement of Teaching**, 22, 80.
**Carter, J. C.** (*U.*), 62, 79.
**Carter, J. C.** (*P.*, *L.*), 71, 108.
**Carter, J. C. Loan** (*L.*), 71, 108.
**Carter, J. W.**, 57, 62, 79.
**Cary, T.** (*S.*), 71, 106, *107*.
**Castle, W. R.** (*B.*), 18, 46, *49*, 59, 69, 103.
**Centennial, for the Botanic Garden**, $17^{9}$, 46, 63, $119^{2}$.
**Cercle Français de l'Université Harvard** (*F.*), 24, 85, *94*.
**Certificate, Committees to examine the Treasurer's Accounts**, 137.
**Changes in the Funds, Table**, 7.
**Chapman, G.** (*S.*), 71, 106, *107*.
**Cheever, D. W.** (*S.*), 75, 112, *113*.
**Chemistry**, *99*.
**Child, F. J.** (Memorial), 20, 46, 63, 83, 90, *98*.

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China, Gifts for Expedition to, 33[13], 76, 118, *118*.
Chinese Students, Gifts for, 24[3], 77, 91, *98*.
Choate, R. S. (*S.*), 66, 85, *94*.
Clapp, J., 70, 106.
Clapp, J. (*S.*), 71, 106, *107*.
Class of 1802 (*S.*), 66, 86, *94*.
Class of 1814 (*S.*), 66, 86, *94*.
Class of 1815, Kirkland (*S.*), 66, 86, *94*.
Class of 1817 (*S.*), 66, 86, *94*.
Class of 1828 (*S.*), 66, 86, *94*.
Class of 1834, 60, 77, 131.
Class of 1835 (*S.*), 66, 86, *94*.
Class of 1841 (*S.*), 66, 86, *95*.
Class of 1844, 60, 77, 131.
Class of 1846, 77, 131.
Class of 1851, 69, 104.
Class of 1851 (C. F. Dunbar), 69, 104.
Class of 1852, Dana (*S.*), 66, 86, *95*.
Class of 1853, *43*, 60, 77, 131, *131*.
Class of 1856, *43*, 77, 131, *131*.
Class of 1856 (*S.*), 66, 86, *95*.
Class of 1867 (*S.*), 66, 86, *95*.
Class of 1868, Free Bed, 76, 130.
Class of 1877 (*S.*), 66, 86, *95*.
Class of 1880, 63, 83, 104, 121.
Class of 1881 (*B.*), 69, 90, *98*, *134*.
Class of 1881, Twenty-fifth Anniversary Fund, 18, 46, 65, 83, 84.
Class of 1882, 18, 46, 63, 83.
Class of 1883 (*S.*), 66, 86, *95*.
Class Subscription, 18, 46, 63, 83[2].
Classical Library, 65, 90, *99*.
Classical Publication Fund of the Class of 1856, 63, 90, *98*, 133.
Codman, E. W., 48, 58, 63, 84.
College, 22, *35*, 136.
  Funds, 63–70.
  Tables, 8, 88, *94*.
Committee on the Publication of Academic Distinctions, *102*.
Comparative Medicine, School of, 74, 112.
Conant, E. (*D.*), 70, 106.
Conant, E. (Library), 69, 103, 104, *104*, *134*.
Constantius, 69, 103, 104, *104*.
Construction Accounts, *45*, 136.
  Table, 132, *133*.
Construction Gifts (balances), 77.
Coolidge, Debating (*Pr.*), 69, 89, *97*.
Coolidge, E. E., 18, 46, *49*, 58, 62, 79[2], 88, *97*.
Coolidge, T. J., 58, 63, 127, *127*.
Cotting Gift (*Be.*), 75, 112, *113*.
Cotton, T., 62, 79.
Cowdin, J., 62, 79.
Croft, C. B., 81, *43*, 73, 112, *114*, 131, *131*.
Crowninshield (*S.*), 66, 86, *95*.
Cryptogamic Herbarium, 63.
Cuban Teachers, Gifts for, *43*, 77, *131*.
Cudworth, W. H. (*S.*), 24, 66, 86, *95*.
Cummings, F. H. (*S.*), 66, 86, *95*.

Dana, Class of 1852 (*S.*), 66.
Dane (*P.*), 71, 108.
Danforth, T. (*Be.*), 68, 88.
Dante (*Pr.*), 69, *97*, 133.
Day, M. (*Be.*), 68, 88, *97*.
Delano, W. Jr., Loan (*S.*), 72.
Denny (*B.*), 69, 103, *104*.
Dental School, *37*, 136.
  Funds, 75.
  Tables, 11, 116, *116*.
Dental School (balance), 75, 116.
Dental School, Building, 32[77], 75, 116.
Dental School Endowment, 75, 116.
Dental School Real Estate (balance), 75, 116, *116*.
Derby, G. and M. (*S.*), 66, 86, *95*.
Dexter, J. (*S.*), 66, 86, *95*.
Dexter Lectureship, 70, 106.
Dillaway, G. W. (*F.*), 65, 85, *94*.
Disbursements and Receipts, General Statement, 34.
Divinity School, *37*, 136.
  Funds, 70, 71.
  Library, 27[2], 107.
  Tables, 10, 106, *107*.
Divinity School (balance), 70, 106.
Doe, O. W. (*C.*, *S.*), 66, 86, *95*.
Doe, O. W. (*M.*, *S.*), 75, 112, *113*.
Dormitories:
  College, *35*, 42, 93, *101*.
  Divinity School, 42, 107.
Dorr, G. B., 57, 62, 79.
Draper, G., 57, 62, 79.
Draper Memorial, 80, 75, 121, *121*.
Dudley, P., 63, 83.
Dunbar, C. F. (Class of 1851), 69, 104.

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**Eaton** (*P.*), 63, 83.
Economics, 27, 90, *99*.
**Eddy, R. H.**, 18, 46, 57, 62, 79[2].
**Education, Department of** (*S.*), 24, 66, 86, *95*.
**Eliot** (*P.*), 63, 83.
**Eliot, Jon. Phillips' Gift** (*P.*), 58, 63, 83.
**Eliot, W. S.** (*S.*), 66, 86, *95*.
**Ellery, J.** (*Be.*), 68, 88.
**Ellis, C. and L.**, *43*, 59, 73, 111.
**Ellis, C. and L.** (Aid), 60, 77, 83, 88, *97*, 131, *131*.
**Ellis, H.**, 62, 79.
**Emerson, G. H.** (*S.*), *43*, 44, 72, 86, *95*, 131, *131*.
Emerson Hall (Construction), *134*.
**Emerson Hall** (Furnishing), 22, 65, 91, *99*.
**Emerson Hall** (Furnishings, Social Ethics), 65, 91, *99*.
**Emperor William**, 21[20], 46, 72, 125[2].
**Engineering** (Electrical Apparatus), 65.
**Engineering** (*P.*), 72, 84.
Engineering (*S.*), 24.
**Erving** (*P.*), 63, 83.
**Ethics, Social**, 65[2].
**Eveleth, J.** (*S.*), 66, 86, *95*, 112, *113*.
**Exhibitions** (*Be.*), 68, 88, *97*.
Expenses and Income (General Statement), 34.

**Fabyan, G., Foundation for Comparative Pathology**, 73, 111, 112, *114*.
**Fall River** (*S.*), 66, 86, *95*.
**Farrar, E.** (*B.*), 69, 103, *104*.
**Farrar** (*S.*), 66, 86, *95*.
**Fay, S. P. P.** (1798) (*S.*), 17, 46, 71, 108[2].
Fees:
Examination, 42[5], 92, 113, 116.
Graduation, 42, 92, 113.
Hemenway Gymnasium, 44, 129.
Infirmary (Dental School), 116.
Laboratory, 42[4], 92, 113, 116, 119.
Library, 104.
Matriculation, 42, 113.
Microscopes, 44, 116.
Repaid to Instructors, *37*, *115*[2].
Stillman Infirmary, 44, 130.
Tuition, 42[11], 92, 107[2], 109, 113, 116, 117.
Fellowships:
Funds, 65, 74.
Receipts, 24, 25[5], 31, 85, 111, 116, 123.
Payments, *35*, *37*, *94*, *113*, *116*, *124*.
Fines (*B.*), 42, 104, *105*, 107, 123.
**Fisher** (*P.*), 63, 83.
**Fisher, G.** (*S.*), 71, 109.
**Fitch, T.** (*Be.*), 68, 88.
**Fitz, S. E.**, 73, 111.
**Flynt, E.** (*Be.*), 68, 88.
**Flynt, H.** (*Be.*), 68, 88.
**Flynt, H.** (for Tutors), 63, 83.
Fogg Art Museum, 22, *41*, *81*, *134*, 136.
Funds, 76.
Tables, 15, 126, *126*.
**Fogg Art Museum** (balance), 76, 126, *126*.
**Fogg, W. H.**, 76, 126, *126*.
**Foster, J.** (*Be.*), 75, 77, 109, *113*.
**Foster, R. W.**, 62, 79.
**Free Bed Fund of the Class of 1868**, 76, 130.
**Free Bed Fund for Stillman Infirmary**, 76, 130.
**French, J. D. W.**, 57, 62, 79.
French, Library, *99*.
**Frothingham** (*P.*), 70, 106.
**Fuller, A. W.**, 70, 106.
Funds and Balances, Table, 62.
Funds in trust for purposes not connected with the College, 77, 80.

Gains from changes of investments:
General, 5, 133.
Special, 6, 133.
**Gains and Losses for General Investments**, 5[2], 77, 133, *135*.
**Gambrill, R. A.** (*S.*), 66, 86, *95*.
**Gardner, G. A.**, 72, 90, *98*.
**Garrison, L. McK.** (*Pr.*), 69, 89, *97*, *134*.
**German Professorship** (*C.*), 18[2], 46, 63, 83.
Germanic Museum, 21[20], *39*, *81*, 136.
Funds, 72.
Tables, 14, 125, *125*.
**Germanic Museum** (Collections), 65.
**Gibbs, H.** (*Be.*), 68, 88.
**Gibbs, V. B.** (*S.*), 72, 122.
Gifts received for
Funds (capital), 7, 17–22, 46.
Immediate use, 22–34, 44.

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**Glover, J.** (*Be.*), 68, 88.
**Godkin Lecture**, 63, 83.
**Goodwin, C. H.** (*S.*), 66, 86, *95*.
**Goodwin, O.**, Memorial (*F.*), 65, 85, *94*.
**Gore**, 62, 79.
Gore Hall, Addition to, $28^{16}$, *45*, 132, *133*.
**Gospel Church**, 63, 83, 131.
**Gould, L.**, 70, 106.
Graduate School of Applied Science, Funds, 72.
Graduate School of Applied Science (*S.*), 24.
**Gray** (Engravings), 76, 126, *126*.
**Gray, A.** (Copyrights), 44, 120.
**Gray, A.** (Memorial), 63, 120.
**Gray, A.** (*P.*), 63, 83.
Gray Herbarium, $29^{92}$, $30^{52}$, *39*, 136.
Tables, 12, 120, *120*.
**Gray Herbarium** (balance), 63, 120.
**Gray, J. C.**, 57, 62, 79.
**Gray**, Zoölogical Museum, 72, 122.
**Greene, B. D.** (*S.*), 67, 86, *95*.
**Greenleaf, P.**, 48, *49*, 61, 77.
**Greenleaf, P.** (Aid) (*Be.*), 68, 88, *97*.
**Greenleaf, P.** (*B.*), 70, 103, 104, *104*, 133.
**Greenleaf, P.** (*S.*), 67, 86, *95*.
**Greenough, F. B.**, 17, 46, 73, 110, 112.
**Gurney**, *43*, 63, 83, 131, *131*.
Gymnasium, see Hemenway.

**Hale, G. S. and E. S.**, 63, 90, *98*.
**Hall, L. J.**, 70, 107.
**Hancock, C. L.**, *43*, 60, 70, 106, 131, *131*.
**Hancock, J.** (*P.*), 70, 106.
**Harlow, E. A. W.** (*Be.*), 19, 46, 68, 83, 88, *97*.
**Harris** (*F.*), 65, 85, *94*.
**Harris, C.**, 75, 121.
**Harris, H.**, 77, 79, 111.
Harvard Club of Buffalo (*S.*), 24, 86, *95*.
Harvard Club of Chicago (*S.*), 24, 86, *95*.
Harvard Club of Louisiana (*S.*), 24, 86, *95*.
Harvard Club of St. Louis (*S.*), 24, 86, *95*.
**Harvard Dental Alumni**, 75.
Harvard Dining Association, 48, *49*, 50, *51*.
**Harvard Medical Alumni**, 19, 31, 46, 73, $110^{3}$.
**Harvard Memorial Society**, 77, 131.
Harvard Psychological Studies, $28^{4}$, 91, *99*, 133.
**Harvard Oriental Series**, 63, 90, *98*.
**Hastings, W.**, 57, 62, 79.
**Haven** (*D.*), 70, 106.
**Haven** (*O.*), 75, 121.
**Haven, H. A.** (*B.*), 69, 103, *104*.
**Haven, J. A.** (*S.*), 67, 86, *95*.
**Hayden, L. and H.** (*S.*), 75, 112, *113*.
**Hayes, F. B.** (*B.*), 69, 103, *104*.
**Hayward, G.** (*B.*), 69, 103, *104*.
**Hayward, J.**, 75, 121.
Heating Plant, Use of, 123.
**Hemenway** (*F.*), 73, 123, *124*.
Hemenway Gymnasium, *35*, *41*, *99*, 136.
Tables, 16, 129, *129*.
**Herbarium**, 63, 120.
**Hersey** (*P.*), 64, 83, 111.
**Hersey**, Thomas Lee's Gift (*P.*), 64, 83.
**Higginson, G.** (*P.*), 73, 111.
**Higginson, H. L.**, 22, 62, 79.
**Hilton, W.** (*S.*), 67, 86, *95*, 112, *113*.
**History and Government** (*Pr.*), 69, *97*.
**Hoar, E. R.** (*S.*), 67, 86, *95*.
**Hoar, L.** (*S.*), 67, 86, *95*.
**Hoar, S.**, 71, 106.
**Hodges** (*S.*), 67, 86, *95*.
**Hodges, R. M.** (Library), 69, 104, *134*.
**Hollis** (*S.*), 67, 86, *95*.
**Hollis**, Divinity (*P.*), 64, 83.
**Hollis**, Mathematics (*P.*), 64, 83.
**Hollis, T.** (*B.*), 69, 103, *104*.
**Holyoke, E.** (*Be.*), 68, 88.
**Homans Memorial** (*P.*), 19, 31, 46, 73, 110, 111.
**Homer, S.** (*B.*), 69, 103, *104*.
**Hooper, E. W.** (*F.*), 65, 85, *94*.
**Hooper, S.** (*P.*), 72, 122, *122*.
**Hopkins, E.** (*Pr.*), 44, 69, 89, *97*.
Horticultural Department, 117, *117*.
Houses, Use of, 80, 117, 119, 121.
**Hughes Loan**, 71, 109, *109*.
**Humboldt**, 72, 122.
**Humphrey, H. B.** (*S.*), 67, 86, *95*.
**Hunnewell, W. P.**, 72, 122.
**Hyde, G. B.**, 62, 79.
**Hygiene** (*P.*), *43*, 44, 58, 64, 84, 131, *132*.

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Income,
Rate of dividing, 5.
Remainder, 5.
Table, 34.
Infirmary, Stillman, 130, *130*.
**Ingersoll Lecture**, 64, 84, 90, *98*.
Insurance Awards, 44, 93, 121.
**Insurance and Guaranty**, 57, 62.
Interest on tuition-fees paid in advance, 93, 106, 109, 111, 116, 117.
Investments held July 31, 1907,
General, 6, 52–57.
Special, 6, 52, 57–61.

**Jackson Foundation** (*S.*), 71, 106, *107*.
**Jackson, H., Endowment**, 73, 111.
**Jackson Professorship of Clinical Medicine**, 73, 111.
**Jarvis** (*B.*), 69, 103, *104*.
**Jarvis, L.**, 62, 79.
Jefferson Physical Laboratory, *35*, *41*, *99*, 136.
Tables, 15, 127, *127*.
**Jefferson Physical Laboratory** (balance), 64, 127.
**Jennings, H.** (*S.*), 72, 86, *95*.
**Jones, C. L.** (*S.*), 67, 87, *95*.
**Jones, C. M.** (*S.*), 75, 112, *113*.

**Keayne, R.** (*Be.*), 68, 89.
**Kendall, J. H.** (*S.*), 71, 106, *107*.
**Kendall, N.** (*S.*), 71, 107, *107*.
**Kidder, H. P.** (*D.*), 71, 106.
**Kidder, H. P.** (*U.*) 62, 79.
**Kimball, B.** (*Be.*), 68, 89, *97*.
**Kirkland**, Class of 1815 (*S.*), 66.
**Kirkland, J. T.** (*F.*), 65, 85, *94*.

Land, Use of, 80.
Landscape Architecture, *100*.
**Langdell Hall** (Construction), *45*, *133*.
**Lane, F. A.** (*B.*), 69, 103, *104*.
Law School, *37*, 136.
Funds, 71.
Tables, 10, 108, 109.
**Law School** (*B.*), 71.
**Law School** (balance), 71, 108.
**Law School Library**, 71, 109.
**Lawrence, A.**, 72, 84.
**Lawrence, J.**, 72, 84.
**Lawrence Scientific School Association** (*S.*), 24, 72, 87.
**Lawrence Scientific School Funds**, 72.
**Lawrence Scientific School, Loans Repaid**, 72, 89, *97*.
**Lecompte, W. A.** (*P.*), 19, 46, 74, 110, 111.
Lectures, 84.
**Lee, H.** (*P.*), 64, 84.
**Lee, H.**, Memorial (*F.*), 65, 85, *94*.
**Lee, J.**, 57, 62, 79.
**Lee, T.** (*Hersey P.*), see Hersey.
**Lee, T.** (Reading), 64, 84.
Library, $23^{16}$, $25^{19}$, $26^{20}$, $27^{19}$, 28, *35*, 136.
Funds, 69, 70.
Tables, 9, 103, *104*.
**Library Building**, $23^{16}$, 77, 132, *133*.
Libraries, Special Reference, 28, 91.
**Lienow, H.**, 71, 106.
**Lindall, M.** (*Be.*), 68, 89.
**Linder, A. H.** (*S.*), 75, 112, *113*.
Losses from change of investments.
General, 5, 133, *135*.
Special, 6, 133, *135*.
**Lovering, J.**, 23, 64, 127, *127*.
**Lowell** (*B.*), 69, 103, *104*.
**Lowell** (Botanic Garden), 64, 119.
**Lowell, G. E.** (*S.*), 67, 87, *95*.
Lowell Memorial Library, *99*.
**Lunar Photographs** (Publishing), 75.
**Lyman, A. T.**, 64, 84.
**Lyman, S. B.** (*Be.*), 68.
**Lyman, S. B.** (Loan), 68, 89.
**Lyman, S. B.** (Loan, L. S. S.), 72.
**Lyman, T.**, 62, 79.

**McLean** (*P.*), 64, 84.
**Markoe** (*S.*), 67, 87, *95*.
**Matthews** (*S.*), 67, 87, *95*.
**Medical Library**, 74, 112.
Medical School, $31^{3}$, $32^{5}$, *37*, 133, 136.
Funds, 73, 74, 75.
Real Estate (special), 74, 134, *134*, *135*.
Tables, 10, 110, *113*.
Medical School Undertaking, *37*, 132, *133*, 134, *134*, *135*.
Memorial Hall and Sanders Theatre, *81*.
**Merriam, C.**, 71, 106.
**Merrick** (*S.*), 67, 87, *95*.
**Mills, A.** (*Be.*), 68, 89.
Mineralogy and Petrography, 93, *100*.
Mining and Metallurgy, 91, *99*.
**Minot, C.** (*B.*), 69, 103, *104*.

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**Morey** (*S.*), 67, 87, *95*.
**Morgan, H. T.**, 62, 104.
**Moseley, W. O.** (*P.*), 74, 111.
**Mowlson, Lady** (*S.*), 67, 87, *95*.
**Munroe** (*Be.*), 68, 89, *97*.
**Munson, I.**, 62, 79.
Museum of Comparative Zoölogy, *39*, *99*, 136.
Funds, 72.
Tables, 13, 122, *122*.
**Museum of Comparative Zoölogy** (balance), 72, 122.
**Music Department**, 23[3], 64, 90, 91, *99*.
Neuropathology, 32[2].
**New Endowment** (*D.*), 70.
**New Subscription** (*M.*), 74, 111.
**Newsboys', Boston** (*S.*), 19[3], 24, 46, 67, 83, 87, *96*.
**Nichols, H. G.** (*S.*), 67, 87, *96*.
**Nichols, L.**, 19, 46, 74, 110, 111.
**Noble, W. B.**, 64, 84.
Normal Scholarships, *96*.
**Norton, C. E.** (*B.*), 19, 46, 70, 103[2], *104*.
**Norton, C. E.** (*F.*), 58, 65, 85, *94*.
Nourse, H. S., *43*[2], 48, 57, 62, 79, 131, *132*.

Observatory, 30[2], *39*, *134*, 136.
Funds, 75.
Tables, 13, 121, *121*.
**Observatory Endowment**, 75, 121.
Office Expenses, *80*.
**Oliver, J. P.** (*S.*), 75, 112, *114*.
**Osgood, L.** (*B.*), 70, 103, *104*.
**Osgood, L.** (*S.*), 67, 87, *96*.
**Osgood, M** (*B.*), 70, 103, *104*.
Other Funds for Special Purposes, 76.
Overseers' Expenses, *80*.

**Paine** (*P.*), 75, 121.
**Paine, Robert Treat** (*F.*), 65, 85, *94*.
**Paine, Robert Treat** (*O.*), 75, 121.
**Paine, Robert Troup**, 60, 77, 131.
**Palestine** (Excavations), 77, 124, *124*.
**Palfrey Exhibition** (*Be.*), 68, 89, *97*.
**Parker, F. E.**, 57, 62, 79.
**Parker, J.** (*F.*), 65, 85, *94*.
**Parkman** (*P.*), 71, 106.
**Parkman, F.** (*F.*), 65, 85, *94*.
Pathology, Department of, 32[2].
Gift (balance), 74.
Research, 32[5].
**Pathological Laboratory**, 74, 132, *133*.
Pathological Library, *114*.
**Peabody** (*P.*), *39*, 60, 73, 123.
**Peabody, A. P.**, Memorial (*Be.*), 68, 89, *97*.
**Peabody Building**, 60, 73, 123.
**Peabody Collection**, 60, 73, 123.
**Peabody, F. G.**, 64, 84, 90, *98*.
**Peabody, G. F.** (*S.*), 58, 67, 87, *96*.
Peabody Museum of American Archaeology and Ethnology, 28[2], 30, 31[2], *39*, 73, *81*, 133, 136.
South American Expedition, 31[2], 73, 123, *124*.
Funds, 73.
Tables, 14, 123, *124*.
**Peirce, D. H.**, 64, 84.
**Pennoyer** (*S.*), 67, 87, *96*.
**Perkins** (*P.*), 64, 84.
**Perkins, R. A.** (*S.*), 67, 87, *96*.
**Perkins, W.**, 62, 79.
**Permanent**, 72, 122.
**Permanent Tutors**, 63, 83.
**Peters, E. D.** (*S.*), 72.
**Philadelphia** (*S.*), 67, 87, *96*.
**Phillips, E. B.**, 75, 121.
**Phillips, J.**, 64, 84.
**Phillips, J.** (*Eliot P.*), 58, 63.
**Phillips, W., Memorial** (*S.*), 67, 87, *96*.
Philosophical Library, 27, 65, 91, *99*.
**Physical Laboratory**, 64[2], 127.
**Physical Research**, 23, 65, 127.
**Pierce, H. L.**, 62, 103, *105*.
**Pierce, H. L.** (Residuary) (M.S.), 74, 111.
**Pierce, H. L.** (Residuary), 57, 62, 79, 104, 122, *135*.
**Plantation of Shrubs**, 65, 91.
**Plummer** (*P.*), 64, 84.
Political Economy, see Economics.
**Political Economy, Lectures on**, 64, 84.
**Pomroy, W.** (*Be.*), 71, 107, *107*.
**Pope** (*P.*), 64, 84.
**Porter, C. B.** (*S.*), 75, 112, *114*.
**Potter, S. E., Endowment**, 19, 46, *49*, 59, 64, 120[2].
Premium on Bonds, Repayments, 5, 48.
**President's**, 62, 79.
**Prichard, W. M.**, 76, 126, *126*.
Printing Office, *102*.
Prizes:
Funds, 69, 75.
Receipts, 24, 89.
Payments, *35*, *37*[2], *97*.

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**Proctor**, 74, 112, *114*.
**Public Buildings** (*C.*), *35*, *101*.

**Quinby, J. W.**, 71, 106.
**Quincy, J.**, 75, 121.

**Randall Hall Association**, 48, 50, *51*.
**Randall, J. W.**, 76, 126, *126*.
**Randall, J. W. and B. L.**, 76, 128, *128*.
**Rate of dividing income**, 5.
**Receipts and Disbursements, General Statement**, 34–50, *35–51*.
**Reed, W.** (*S*), 19, 46, *49*, 58, 67, 83, 87.
**Religious Services**, 63, 128.
**Repayments**, 80[2], 93, 113.
**Retiring Allowances**, *35*, *37*, 62, 79, *81*, *115*.
**Ricardo Prize** (*S.*), 24, 67, 87, *96*.
**Richmond, A. C.**, 71, 106.
**Riverside**, 57, 62.
**Robinson, N., Jr.**, 46, 64, 84, 85, 90, *94*, *98*.
**Robinson, N., Jr., Additional**, 20, 58, 64, 83, 84, 90, *98*.
**Rockefeller, J. D.**, 74, 132, *135*.
**Rodger** (*S.*), 67, 87.
**Rogers** (*F.*), 65, 85, *94*.
**Rogers, H. B.** (*S.*), 67, 87, *96*.
**Rogers, H. B., Memorial** (*F.*), 66, 85, *94*.
**Rotch, A.**, 72, 84.
**Royall** (*P.*), 71, 109.
**Rumford** (*P.*), 64, 84.
**Ruppaner, Dr.**, 74, 111.
**Russell, E.** (*S.*), 67, 87, *96*.
**Russell, J. L.** (Botanic Garden and Gray Herbarium), 64, 119, 120.
**Russell, J. L.** (*D.*), 71, 106.
**Russell, J. L.** (*U.*), 62, 79.

**Salaries, Gifts for**, 22, 23, 31[5], 65, 83, 84.
**Salaries, Payments**, *35*[3], *37*[6], *39*[3], *41*[4], *81*, *101*, *105*, *107*, *109*, *115*, *116*, *117*, *118*, *120*, *121*, *122*, *124*, *129*.
**Sales** (*Pr.*), 69, 89.
**Sales (Receipts)**, *44*[6], 80[8], 93[13], 103, 104, 107[3], 109, 112, 116[2], 117, 118, 119, 120[4], 121[4], 126.
**Sales** (*S.*), 67, 87, *96*.
**Sales, F.** (*B.*), 70, 103, *105*, 133.
**Salisbury, S.** (*B.*), 20, 46, 70, 103[2], 104, *105*.
**Saltonstall** (*S.*), 67, 87, *96*.
**Saltonstall, G.**, 64, 84.
**Saltonstall, L.** (*S.*), 67, 87, *96*.
**Saltonstall, M.** (*S.*), 67, 87, *96*.
**Sanskrit Department**, 65, 91.
**Sargent, J. O.** (*Pr.*), 69, 89, *97*.
**Savage, J.** (*S.*, *L.*, *O.*), 77, 87, *96*, 104, 121.
**Sawin, G. W.**, 64, 90, *98*.
**Sayles, R. W.** (*C.*), 64, 90, *98*.
**Scholarships:**
  **Funds**, 66, 71, 72, 75.
  **Receipts**, 24[10], 85, 86, 87, 88, 106, 107, 111, 122.
  **Payments**, *35*, *37*[2], *94*, *95*, *96*, *107*, *109*, *113*, *124*.
**Scholarship and Beneficiary Money Returned** (*Be.*), 28, 68, 89, *97*.
**Scholarship Money Returned (Law)**, 71, 109.
**School of Comparative Medicine**, 74, 112.
**Schurz, H., Memorial Free Bed**, 76, 130.
**Searle, M. R.**, 62, 126, *126*.
**Sears, D.** (*O.*), 75, 121.
**Sears, H. F.**, 74, 110, 111, *135*.
**Semitic Building**, 77.
**Semitic Collection**, 77, 124, *124*.
**Semitic Library**, 65, *99*.
**Semitic Museum**, 31, *39*, *81*, *136*.
  **Tables**, 14, 124, *124*.
**Sever** (*B.*), 70, 103, *105*, *134*.
**Sever** (*S.*), 67, 87, *96*.
**Sewall** (*S.*), 67, 87, *96*.
**Sewall, J.** (*Be.*), 68, 89.
**Shaler Memorial**, 20, *43*, 46, 72, 83, 90, *135*.
**Shapleigh, S.** (*B.*), 70, 103, *105*.
**Shattuck** (*S.*), 67, 87, *96*.
**Shattuck, G. C.** (*P.*), 59, 74, 111.
**Shattuck, G. C., Memorial** (*F.*), 74, 111, *113*.
**Shepard, R. H.**, 76, 128.
**Shepard, R. H.** (Memorial), 76, 128.
**Simpkins, J., Laboratories**, 77.
**Skillen Memorial**, 20, *43*, 46, 74, 110, 131, *132*.
**Skinner, F.**, 76, 118.
**Slade** (*S.*), 67, 87, *96*.
**Smith** (*P.*), 64, 84.
**Smith, D.** (*S.*), 58, 67, 87, *96*.
**Smith, G.**, 20, *43*, 46, 60, 77, 131[2], 132, *132*.

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**Social Ethics** (Furnishings), 65, 91, *99*.
**Social Ethics**, Study of, 65, 91, *99*.
Society for Promoting Theological Education, 27, 107.
**Social Workers**, School for, 28, 64, 91, *99*.
**Sohier**, G. B. (*B.*), 70, 103, *105*.
**Sohier**, G. B. (*Pr.*), 69, 89, *97*.
Soldier's Field, The; Improvement and Additions, 33, *45*, 132, *133*, *134*.
South American Expedition, 31[2], 73, 123, *124*.
South End House (*F.*), 25[5], 66, 85, *94*.
**Spackman**, W. M., 64, 84.
**Spooner**, W. B., 71, 106.
Squam Lake Camp, 44, 98[4], *99*.
Stadium, *45*, *133*.
**Stickney**, J., 64, 84.
**Stillman Infirmary**, 76, 130, *130*.
Stillman Infirmary, *43*, 44, 130[3], 136.
Funds, 76.
Tables, 16, 130, *130*.
**Stillman Infirmary** (balance), 76, 130.
**Stillman**, J. (*P.*), 74, 111.
**Story** (*S.*), 67, 87, *96*.
**Story**, A., 75, 121.
**Stoughton** (*S.*), 59, 67, 87, *96*.
**Strong**, C. P. (*S.*), 75, 112, *114*.
Students, Receipts from, 92.
**Subscription for Library** (*B.*), 70, 103, *105*.
**Sugar Cane Investigations**, 65, 119, *119*.
Summaries:
Investments and Income, 6.
Tables, 136.
Summer Schools, *35*, 44, *99*, *100*.
**Sumner**, C. (*B.*), 70, 103, *105*.
**Sumner**, C. (*Pr.*), 69, 89.
Sundry Accounts, 136.
Table, 133, *134*.
**Sundry Balances** (*L.*), 70.
**Sundry Balances** (Sundry Funds), 77, 134.
**Sundry Gifts** (balances), 65, 74.
**Sundry Gifts for books** (balances), 70.
**Sundry Gifts for services** (balances), 70.
Sundry Funds, 77.
Sundry Funds for Special Purposes, 76, 90, *98*, 112, *114*, 136.
Table, 131, *131*.
**Surgical Laboratory**, 74, 112, *114*.
Surgical Laboratory, 32.
**Sweetser**, I. (*M.*, *S.*), 75, 112, *114*.
**Sweetser**, I. (*U.*), 62, 79.
**Swett**, M. W., 74, 111.
**Swett**, S. W., 74, 111.
**Swift** (*S.*), 67, 87.

Tables:
Appleton Chapel, 15, 128, *128*.
Arnold Arboretum, 12, 118, *118*.
Botanic Garden and Botanical Museum, 12, 119, *119*.
Phillips Brooks House, 16, 128, *129*.
Bussey Institution, 11, 117, *117*.
Changes in the Funds, 7.
College, 8, 83, *94*.
Construction Accounts, 132, *133*.
Dental School, 11, 116, *116*.
Divinity School, 10, 106, *107*.
Fogg Art Museum, 15, 126, *126*.
Funds and Balances, 62.
Germanic Museum, 14, 125, *125*.
Gray Herbarium, 12, 120, *120*.
Hemenway Gymnasium, 16, 129, *129*.
Jefferson Physical Laboratory, 15, 127, *127*.
Law School, 10, 108, *109*.
Library, 9, 103, *104*.
Medical School, 10, 110, *113*.
Medical School Undertaking, 132, *133*.
Museum of Comparative Zoölogy, 13, 122, *122*.
Observatory, 13, 121, *121*.
Peabody Museum, etc., 14, 123, *124*.
Semitic Museum, 14, 124, *124*.
Stillman Infirmary, 16, 130, *130*.
Summary, balanced, 136.
Sundry Accounts, 133, *134*.
Sundry Funds for Special Purposes, 131, *131*.
University, 8, 79, *80*.
**Taylor**, J. T. (*S.*), 75, 112, *114*.
**Taylor**, K. M. (*B.*), 70, 103, *105*.
**Teachers' and Pupils'**, 72, 122.
**Teachers' Endowment**, 20, 22, 46, 59, 64, 83, 84.
**Thaw** (*F.*), 60, 73, 123, *124*.
**Thayer** (*S.*), 67, 87, *96*.
**Thayer**, A. W. (*Be.*), *43*, 68, 89, 131. *132*.

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**Thayer, J. E.**, 64, 90, *98*.
Theory and Practice, Anonymous Fund in the Department of, 73, 110.
**Thomas, G.** (*S.*), 67, 87, *96*.
**Thorndike, W. H.** (*Pr.*), 75, 112.
**Tileston, T.**, 71, 106.
**Toppan** (*S.*), 67, 88, *96*.
**Toppan, R. N.** (*Pr.*), 69, 89, *97*.
**Torrey, E.**, 64, 90, *98*.
**Torrey, H. W.**, 64, 90, *98*.
**Townsend** (*S.*), 67, 88, *96*.
**Townsend, M. P.**, 71, 106.
**Treadwell, D.**, 70, 103, 104, *105*.
**Tucker, I.** (*B.*), 59, 70, 103, *105*.
**Tufts, Q.** (*Be.*), 68, 89, *97*.
**Tufts, Q.** (*M.*), 74, 111.
**Turner, S.**, 62, 79.
**Tyndall, J.** (*F.*), 66, 85, *94*.

University, *35*, 136.
Funds, 62.
Scholarships, *96*[3].
Tables, 8, 79, *80*.
**Unknown Memorial**, 65, 84, 90, *98*.
**Unrestricted Gift**, Germanic Mus., 72, 125, *125*.

**Villard, H.**, 57, 65, 84.

**Wadsworth, B.** (*Be.*), 68, 89.
**Walcott** (*S.*), 68, 88, *96*.
**Walcott, H. P.**, 76, 130.
**Wales** (*P.*), 59, 65.
**Wales, H. W.** (*B.*), 70, 84, 103, *105*.
**Walker, J.** (*B.*), 70, 103, *105*.
**Walker, J.** (*F.*), 66, 85, *94*.
**Ward, S.**, 59, 65, 130.
**Ward, T W.** (*B.*), 70, 103, *105*.
**Ward, W.**, 71, 106.
**Ware, C. E., Memorial** (*F.*), 74, 111, *113*.
**Ware, J., Memorial** (*F.*), 74, 111, *113*.
**Warren** (Anatomical Museum), *37*, 74, 112, *114*.
**Warren, C. M.**, 65, 90, *98*.
**Warren, H. C.** (*C.*), 65, 84, 90.
**Warren, H. C.** (Dental School), 75, 116.
**Warren, H. C.** (Exploration), 73, 123, *124*.
**Warren, S. C.**, 73, 123.
**Washburn, P.** (*Pr.*) 69, 89, *97*.
**Waterhouse, S.**, 65, 84.
**Weld** (*P.*), 71, 109.
**Weld, C. M.** (*S.*), 68, 88, *96*.
**Weld, W. F.**, 57, 62, 79.
**Wells, D. A.** (*P.*, *Pr.*), 69, 84, 89, 90, *97*, *98*.
**Wendell, J.** (*S.*), 68, 88, *96*.
**Wheeler, I. S.**, 65, 128.
**Wheeler, S. W.** (*Be.*), 72, 89, *97*.
**Wheelock, J.**, 20, 46, 65, 83, 84.
**Whiting** (*F.*), 66, 85, *94*.
**Whiting** (*S.*), 68, 88, *96*.
**Whitney, J. D.** (*S.*), 68, 88, *96*.
**Whitney, M. L.** (*S.*), 44, 68, 88, *96*.
**Wigglesworth, E.** (*P.*), 21, 46, 74, 110, 111.
**Wigglesworth, E.** (*S.*), 75, 112, *114*.
**Wilder, C.**, *43*, 74, 131, *132*.
**Williams, D.**, *43*, 77, 131, *132*.
**Williams, H. W.** (*P.*), 74, 111.
**Willard** (*S.*), 17, 46, 68, 83, 88.
**Winn** (*P.*), 71, 106.
**Winslow, S.**, *43*, 77, 80, 131, *132*.
**Winthrop, R. C.** (*S.*), 73, 123, *124*.
**Wolcott, H. F.**, 73, 123, *124*.
**Wolcott, J. H.** (*B.*), 70, 103, *105*.
**Woodland Hill**, *43*, 60, 76, 131, *132*.
**Wright, C.**, 65, 90.
**Wright, E.**, 70, 104.
**Wyman, C.** (*S.*), 68, 88, *96*.

Zoölogical Laboratory Contributions, 28[2], 91, *99*.

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# OFFICIAL REGISTER

OF

# HARVARD UNIVERSITY

VOLUME VI APRIL 24, 1909 NUMBER 10

## REPORTS

OF

## THE PRESIDENT AND THE TREASURER

OF

## HARVARD COLLEGE

## 1907–08

Published by Harvard University
CAMBRIDGE, MASS.

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# REPORTS

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# THE PRESIDENT AND THE TREASURER

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## 1907–08

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1909

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# CONTENTS


| | Pages |
|---|---|
| PRESIDENT'S REPORT | 5–52 |
| REPORTS OF DEPARTMENTS: — | |
| The Faculty of Arts and Sciences | 53–103 |
| The College | 104–114 |
| Athletic Sports | 115–121 |
| The Graduate School of Arts and Sciences | 122–148 |
| The Graduate School of Applied Science | 149–152 |
| The Graduate School of Business Administration | 153–155 |
| The Divinity School | 156–163 |
| The Law School | 164–167 |
| The Faculty of Medicine | 168–170 |
| The Medical School | 171–186 |
| The Dental School | 187–192 |
| The Library | 193–224 |
| Appleton Chapel and the Phillips Brooks House | 225–230 |
| The Gray Herbarium | 231–236 |
| The Botanic Garden | 237–241 |
| The Arnold Arboretum | 242, 243 |
| Forestry | 244–247 |
| The Chemical Laboratory | 248–252 |
| The Jefferson Physical Laboratory | 253, 254 |
| The Division of Engineering | 255–258 |
| The Psychological Laboratory | 259, 260 |
| The Observatory | 261–268 |
| The Museum of Comparative Zoölogy | 269–274 |
| The Zoölogical Laboratory | 275–278 |
| The Department of Geology and Geography | 279–287 |
| The Division of Mining and Metallurgy | 288–292 |
| The Mineralogical Museum and Laboratories of Mineralogy and Petrography | 293, 294 |
| The Peabody Museum of American Archaeology and Ethnology | 295–306 |
| The Semitic Museum | 307–309 |
| The Fogg Art Museum | 310–312 |
| The Germanic Museum | 313–315 |
| Collection of Classical Antiquities | 316, 317 |
| Summer Courses of Instruction | 318–324 |
| Radcliffe College | 325–328 |
| APPENDIX | 329–362 |
| INDEX | 363–367 |


TREASURER'S STATEMENT

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# PRESIDENT'S REPORT FOR 1907–08

To the Board of Overseers: —

The President has the honor to submit the following Report for the academic year 1907–08, namely, from September 26, 1907, to October 1, 1908: —

The following table exhibits the distribution among the twenty-seven departments of instruction in the Faculty of Arts and

| Department. | 1868-1869. | | | | 1888-1889. | | | | 1908-1909. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Professors. | Assistant Professors. | Tutors and Instructors. | Annual Appts. | Professors. | Assistant Professors. | Tutors and Instructors. | Annual Appts. | Professors. | Assistant and Assoc. Profs. | Tutors and Instructors. | Annual Appts. |
| Semitic | .. | .. | .. | .. | 2 | .. | .. | .. | 3 | 1 | .. | 1 |
| Indic | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | .. |
| Classics | 3 | 1 | 3 | .. | 7 | 1 | 2 | 1 | 7 | 5 | .. | 3 |
| English | 1 | .. | .. | .. | 2 | 2 | 2 | 3 | 9 | 1 | 4 | 19 |
| German | .. | 1 | 2 | .. | .. | 2 | .. | 1 | 3 | 2 | 1 | 8 |
| Slavic | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| French | 1 | .. | .. | 1 | 2 | 2 | 2 | 2 | 3 | 4 | .. | 11 |
| History | 2 | 1 | .. | .. | 2 | 2 | 2 | 2 | 9 | 4 | .. | 21 |
| Economics and Business Sch. | .. | .. | .. | .. | 1 | 1 | .. | 2 | 5 | 3 | .. | 28 |
| Soc. Ethics and Philosophy | 2 | .. | .. | 1 | 5 | 1 | .. | 1 | 5 | 4 | 1 | 16 |
| Education | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 |
| Fine Arts | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 1 | 1 | 2 |
| Architecture and Land. Arch. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 3 | 11 |
| Music | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | 1 | 2 |
| Astronomy and Mathematics | 1 | 1 | 1 | 1 | 3 | .. | 1 | .. | 4 | 3 | .. | 3 |
| Physics | 2 | .. | .. | .. | 2 | 1 | 1 | 4 | 4 | 2 | 2 | 4 |
| Chemistry | 1 | .. | 1 | 1 | 3 | .. | 1 | 4 | 3 | 2 | .. | 19 |
| Engineering | 1 | .. | .. | .. | 1 | .. | .. | .. | 4 | 5 | 3 | 15 |
| Forestry | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 |
| Botany | 1 | .. | .. | .. | 2 | .. | .. | 1 | 5 | 1 | .. | 9 |
| Zoölogy | 1 | .. | .. | .. | 2 | .. | .. | 4 | 4 | .. | 1 | 6 |
| Geology | 1 | .. | .. | .. | 2 | 1 | .. | 1 | 1 | 4 | .. | 6 |
| Mineralogy | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 |
| Mining | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | .. | 6 |
| Anthropology | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 3 |
| Physiology | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 4 |
| Public Speaking | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | 4 |
| Totals | 18 | 4 | 8 | 5 | 39 | 13 | 12 | 29 | 79 | 56 | 19 | 204 |



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Sciences of professors, assistant professors, instructors appointed without limit of time, and annual appointees at three periods, twenty years apart, namely, 1868–69, 1888–89, and 1908–09. Of the twenty-seven departments now effective, eleven did not exist in 1868–69, and two others were but feebly represented, one by a tutor, and one by an annual appointee. The relative development of the departments in an old institution is affected by three distinct considerations — local history or tradition, the successive receipts of endowments for specified purposes, and the changing demands of the new generations of students. Logical or consistent development is, therefore, not to be expected.

The Faculty of Arts and Sciences paid attention during the year to several interesting questions of general policy. Thus it considered "how the tests for rank and scholarly distinction in Harvard College can be made a more generally recognized measure of intellectual power," and appointed a committee to make a study of this subject. That study is not yet completed; but the Committee has already found that those portions of the educated public which have disassociated in their own minds scholarly success in College from success in the professional school, and in the subsequent profession or business occupation, have no sound foundation for their opinions. A short inquiry already indicates plainly that power to work attained in College tells, as a rule, in the later professional school and in the profession, quite as it ought to; although there are some persons who do little or nothing in College, but later acquire in their professional schools or the practice of their professions the serviceable power of intellectual concentration and persistence. The report of the Committee has not yet been made.

In 1906–07, the Board of Overseers had under consideration for some months, through a special committee, the means of bringing before the public the names and qualities of high scholars in Harvard College, and of conferring on these scholars some marks of approval and some public distinction, the Overseers being desirous that high scholars should win distinction comparable with that which athletes win. The Board finally referred a report made to it on this subject to the President and Fellows,

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and the President and Fellows consulted the Faculty on the subject. All three Boards found the subject a difficult one; because athletes display their quality before thousands of spectators, and their physical and moral qualities become known to multitudes; whereas the scholar's work is done in private, and its results are known only to himself, his teachers, and a few intellectual comrades. Moreover, the athlete's exhibition is made at the life-climax of the exhibited powers; whereas the young scholar's exhibition is made at the very opening of a life-long career, the climax of which is remote. The appropriate plaudits for the athlete come instantly from a shouting throng, but for the scholar from a few calm friends and scattered comrades in scholarly labors.

The actual outcome of the discussion was that the President and Fellows voted on October 14, 1907, "To request the Faculty of Arts and Sciences to post conspicuously on Commencement Day in Memorial Hall, and at their discretion in other places, the names of those students in Harvard College whose scholarship during the year then closing the Faculty deemed worthy of such distinction."

In all probability one of the reasons that high scholarship at college does not excite in this country the interest it excites in Oxford or Cambridge is that scholarship is here displayed in a great variety of fields, rather than in a few perpetual subjects in which alone distinction is won, subjects common to the present and the earlier generations of educated men. From this diversity results a great increase of mental power in the educated community as a whole, but a much diminished chorus of approval for a young man who distinguishes himself in any particular subject. In England, for many generations, the good scholar has won approval for eminent attainments either in the Classics or in mathematics. There is no such simple method of comparison here. Moreover, in America, unlike England, eminent success in college may open no gate to immediate employment; whereas eminent success in a professional school usually proves to be the means of rapid advancement in the corresponding profession. High scholarship in college must, therefore, be its own reward through the acquisition of the habits and powers of the scholar, and this reward cannot be enhanced by efforts after publicity through public meetings, special garments, or decorations which

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only high scholars can wear. Military decorations are usually given either for special acts of gallantry or for long distinguished service. The decorations or orders so valued in European academic and diplomatic life are usually given for eminent services in mature life, and confer in Europe certain social advantages. A decoration won in youth at an American college for youthful attainments, of whatever promise, can bear no resemblance to the marks of distinction of which European governments, academies, and orders or associations of distinguished persons make such ample use.

Requests for certain forms of university extension engaged the earnest attention of the Faculty during the year, because they touched a very important matter of general policy. They raised the question, how far the University can take part in efforts made in its vicinity to improve the scholarly quality of teachers in the public schools, or to carry on, at points more or less remote from the University, instruction of a college grade for persons whose education has been interrupted at or near the end of the ordinary high school course, and who can only devote their evenings, and perhaps one afternoon in the week, to further study. In an endowed university a different temper prevails from that which prevails in state universities. Every state university eagerly desires to serve the public within the boundaries of its state in every possible manner, and is ready to devote a considerable part of the energy of its teaching staff to works of instruction carried on at many points, most of which are remote from the university's seat. The state university being supported by public money, and this money being biennially appropriated by a state legislature, all the university authorities are eager to justify the public expenditure made on the university. This sense of duty to the state is much less felt in an endowed university; because such a university does not depend for its maintenance and its improvement on appropriations made by a legislature. Nevertheless, the endowed university, particularly if it be old and rich, is really under obligation to the state, which has protected and nurtured it, to do everything in its power to improve the means of education, the position of the teacher, and the industrial condition of the state in which it is situated. The Harvard Faculty of Arts

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and Sciences recognizes this obligation, and took steps in this direction during the year 1907–08. Thus it provided several courses for teachers actually employed in the public schools of Boston and the vicinity. It enlarged the number of courses given in summer for teachers and other competent persons, which can be counted toward the degree of A.B., S.B., or A.M., without, however, modifying the statutory provision which requires that no ordinary degree shall be conferred except after a residence at the University of at least one year. Near the end of the year the Faculty ordered "that a committee of seven be appointed to investigate and report whether, and under what circumstances, it is desirable that the members of this Faculty should do supplementary teaching, and what should be the attitude of the Faculty toward the demand that extension courses should be counted toward a degree" (p. 96).

At the opening of the year an addition was made to the Division of Education by the appointment of a new instructor, Mr. Henry W. Holmes, A.B. 1903, A.M. 1904. This additional appointment was made possible by the generosity of persons interested in the spread of Froebel's educational doctrines, and in the exposition of Froebel's work in relation to that of other educational reformers, and of his services in the development of educational theory and practice. The gift will provide also for the expenses of the courses in Education intended especially for the training of normal school teachers, and of principals and superintendents of schools.

The Lowell Institute Collegiate Courses, given in coöperation with Harvard University for the first time during the year under review, were two in number, one on General European History by Professor Haskins, and one on English Literature and Composition by Mr. Copeland. These courses were open to men and women, and any student could take either one course or both courses. An unexpectedly large number of persons applied for places in these classes, and of the number admitted a good proportion accomplished the work of the year. Both courses were given in the buildings of the Harvard Medical School on Longwood Avenue. The experiment was a novel one, but was so successful during its first year that it is to be continued and somewhat enlarged in the year now current. No tuition fee is required for

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these courses; and it is expected that every person who attends them will do a good amount of work outside the lecture room. In subject matter, methods of instruction, examinations, and scale of marking, these collegiate courses of the Lowell Institute are given as nearly as may be in the same manner as in Harvard College.

Between 1902–03 and 1908–09 the number of students in the undergraduate departments of Harvard University has decidedly declined, namely, from 2,726 to 2,277; and this decline has been steady, except that there was a rebound in 1906–07 which caused the total in 1907–08 to be the same as that in 1905–06. This period covers the reorganization of the instruction in applied science in Harvard University, the discontinuance of the former four-year programmes in the Lawrence Scientific School, the creation of the Graduate School of Applied Science, and the discontinuance of the Bussey Institution as an undergraduate department. It also includes three years of the work of the new Committee on Admission which was created in the year 1905–06, a committee whose work has made admission to Harvard College in some respects more difficult and in others less difficult. These considerable changes make it hard to discern and value the causes of the decline exhibited in the following table. Nevertheless, some of the results are clear and easily interpreted.

| | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. | 1908–09. |
|---|---|---|---|---|---|---|---|
| Harvard College . { regular | 1987 | 1936 | 1862 | 1748 | 1984 | 2046 | 2054 |
| Harvard College . { special | 122 | 137 | 147 | 151 | 263 | 231 | 184 |
| Lawrence Scientific { regular | 464 | 428 | 402 | 368 | 204 | 96 | 39 |
| School { special | 120 | 120 | 128 | 151 | . . | . . | . . |
| [*Combined special students*] | [*242*] | [*257*] | [*275*] | [*302*] | [*263*] | [*231*] | [*184*] |
| Bussey Institution . . . . . | 33 | 32 | 33 | 39 | 43 | 22 | . . |
| Grad. Sch. of Appl. Science . | . . | . . | . . | . . | 29 | 63 | 70 |
| Total . . . . . | 2726 | 2653 | 2572 | 2457 | 2523 | 2458 | 2347 |

In the first place, the number of special students admitted to Harvard College and the Lawrence Scientific School together has fallen from 302 in 1905–06 to 184 in 1908–09. This fall has been due to the operations of the Committee on Admission, which have

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succeeded in raising very much the quality of the whole class of special students. They have rejected a considerable number of applicants who used to be freely admitted, namely, the applicants who had ample opportunities to get good school training, and to meet the requirements for admission to regular standing, but failed to meet them. The Committee now use the category of special students as a place for the temporary registration of young men who have had a good training, and are persons of good capacity, but who have not prepared themselves specifically for the Harvard admission examinations. Such persons can now register as special students, and later, when they have proved their capacity in College, be transferred to the lists of regular students. More than half the special students admitted in 1908 were persons provisionally admitted in this way, with the promise that a new standing would subsequently be given them in accordance with their first year's record in Harvard College. The great majority of these men had fulfilled the requirements for admission to another college, had completed in that college the work of one or more years, and had furnished evidence that their college work was of good quality. The other special students were earnest persons, who had had a school training equivalent in amount to that upon which the instruction in Harvard College is based, and were able to do the particular college work they wished to undertake. Most of them had been out of school one or more years. Their average age was high — about twenty-five years. There remained a small percentage — in 1908 only one and one-sixth per cent of all the special students admitted — who may fairly be described as men admitted on requirements lower than the College makes; but these men are only technically deficient. This work of the Committee on Admission has been well directed, and judiciously done; but it has resulted in a temporary loss of numbers — 118 in three years.

Another result of the wise policy of the Committee has been to raise in practice the requirements for admission to Harvard College as a candidate for the degree of S.B. much above the former standard of admission to the Lawrence Scientific School as a regular student. The requirements on paper have not been altered; but the requirements in practice have been substantially advanced, in order that the school work demanded of a candidate

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for the S.B. should equal in value that demanded of a candidate for the A.B. Down to 1906–07 no such equivalence existed, either at Harvard University or at any other American university. The Committee on Admission have achieved this result during the last three years. Inevitably this policy has also caused a temporary loss of numbers. These restrictive measures are, however undoubtedly for the ultimate advantage of Harvard College, and of the Graduate Schools which the College feeds. The numbers of students who attended the Graduate School of Applied Science in its first three years are included in the above table; because the first year of that School represents the fourth year of the former programmes of the Lawrence Scientific School, so that the students in the Graduate School of Applied Science may be said in a measure to have replaced those lost from the former fourth year of the Scientific School.

The abolition of the Bussey Institution as an undergraduate department was accomplished by transferring those students in the institution who desired to pursue their studies to the list of special students in Harvard College. The requirements for admission to the Bussey Institution have always been low, and the resources of the Institution were inadequate to provide separate instruction in the sciences which underlie agricultural practice, and in the mathematics, surveying, geography, geology, and economics, which should make part of thorough preparation for agricultural pursuits. All these subjects are now taught abundantly in Harvard College — which was not at all the case when the Bussey Institution was established in 1871. The young man who means to pursue scientific agriculture to-day can get all his preliminary training as a candidate for S.B. in Harvard College. He can then pursue his advanced studies in the Graduate School of Applied Science, of which the Bussey Institution now makes part. Here again a temporary loss of undergraduates has taken place; but ultimate advantages even in regard to numbers are in clear sight.

The report of the Committee on Admission (p. 329) will be found interesting in many respects. It relates chiefly to the unnecessary obstacles which the present arrangement of the Harvard examinations for admission puts in the way of students from

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a distance, and of the pupils in high schools which cannot make special provision for meeting the peculiar requirements of Harvard College. The Chairman of the Committee is convinced that it would be better for Harvard College to abandon its own examinations for admission in June, and rely wholly upon the examinations conducted by the College Entrance Examination Board, on the ground that the examinations conducted by that Board, and their definitions of admission subjects, are better than its own; because the examination papers of that Board are prepared by college and school teachers coöperating together, and because their definitions of admission subjects have a national scope, and are more likely to be adjusted from time to time to the changing conditions of the public secondary schools.

The Committee have already accomplished something toward the clearer definition and the simplification of admission requirements, and the way has been prepared for further improvement in the relations between the secondary schools and the college; but there is still great need of advance in these directions. The boys whose needs ought to be carefully studied are of two sorts — first, boys who, although they have been in good schools, do not develop the desire and purpose to go to Harvard College until late in their school course, as, for instance, during the last school year; and secondly, boys who have been in schools which give their pupils opportunity to learn some subjects well, but do not teach all the subjects which may be offered for admission to Harvard College, or teach in precisely the Harvard way to the Harvard limits. It is almost impossible for the first class of boys to pass all the Harvard admission examinations in one year, and the prospect of such a task discourages them; and for the second class it is hard to obtain points enough to procure admission to regular standing, although they may demonstrate excellent capacity in the subjects which they have had the opportunity of pursuing to advantage. The Committee on Admission have these difficulties clearly in mind, and hope to devise means of making the College accessible to these sorts of public school pupil without lowering the standards of admission.

It should be observed by the Corporation, Overseers, and Alumni, that the number of candidates for admission to Harvard College has recently declined (p. 338) the natural inference

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being that the connection between Harvard College and the secondary schools of the country, or of some parts of the country, is not so good as it formerly was, or that parents and the other advisers of boys who think to go to college see reasons for preferring the training offered by other colleges to the training offered by Harvard College. The fact that there has been a decline in the number of candidates for admission should stimulate the governors and friends of Harvard College to discover the causes of this decline, and the remedies for it, — if there be any, consistent with maintaining the standards of education which Harvard University upholds.

The Dean of Harvard College advocates in his report (p. 108) the statutory establishment of three years as the expected term of residence for the degree of Bachelor of Arts. It is now nearly nineteen years since the Faculty of Arts and Sciences sent a communication to the President and Fellows which embodied the following propositions: —

"1. That the requirements for the degree of Bachelor of Arts be expressed . . . in terms of courses of study satisfactorily accomplished. 2. That the number of courses required for the degree be sixteen. 3. That when a student enters college there shall be placed to his credit towards satisfying the foregoing requirement of sixteen courses — (1) any advanced studies on which he has passed in his admission examination beyond the number required for admission, and (2) any other college studies which he has anticipated. 4. That a student may be recommended for the degree of Bachelor of Arts in the middle as well as at the end of the academic year."

The regular requirements for the degree of Bachelor of Arts were at that time eighteen and four-tenths courses. This proposal of the Faculty was rejected in the Board of Overseers. By votes of the Faculty in later years, the number of courses required for the degree of A.B. was gradually reduced to seventeen, or in some cases, seventeen and one-half courses. The recommendation by the Faculty in 1890, that the degree of Bachelor of Arts should be given in the middle as well as at the end of an academic year, was subsequently adopted by the Governing Boards as a separate measure. In December, 1901, the Board of Overseers passed the following vote: "The Overseers are gratified to find

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in the Catalogue a clear statement of the requirements for the degree of Bachelor of Arts, and they await with interest and sympathy the report of the Faculty which will recognize in a more formal way the system by which students of unusual diligence, or marked mental capacity, may obtain the degree of Bachelor of Arts in three years."

Encouraged by this vote the Faculty, in the spring of 1902, abandoned its former practice of requiring a candidate who accomplished the work for the degree in three years, either to attain higher grades than were required of the candidate who took four years to complete the work, or to wait a year for his degree on leave of absence; and it also raised a little the minimum attainment for the degree of A.B. as expressed in grades.

In Dean Briggs's report for 1891–92 (p. 74) it appeared that thirteen per cent of the 293 persons who received the degree of Bachelor of Arts in June, 1892, had not been members of the Senior Class of that year, twenty candidates having been members of the Junior Class, thirteen of the Graduate School, and six of some one of the professional schools.

In the President's report for 1897–98 a table covering five years was given (p. 22) which showed conclusively "that from a third to two-fifths of each college class have no need of more than three years to complete the eighteen courses required for the degree." The table also demonstrated that the number of persons who completed the work for the degree in three years was increasing, — indeed, that it had doubled within six years. In the same report (p. 24) facts were set forth in detail which showed that much extra work was done by good students during a residence of four years, and that most of this work was done in an admirable manner, and the following general inference was drawn from the facts stated: "Ambitious students, therefore, can either graduate with distinction in three years, or, remaining four years in college, they can do much work beyond the prescribed amount."

In the report of Dean Briggs for the year 1898–99 the following passage occurs: "These, and other indications, show that for better or for worse the three-year degree is close upon us. With a three-year degree a requirement of sixteen courses, or even fifteen, is preferable to a requirement of eighteen." On recom-

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mendation of the Faculty, May 5, 1903, the President and Fellows June 1, 1903, established a new practice whereby a candidate for the degree who has completed the requirements therefor at the end of three years may take his degree then, and have his name inserted in the Quinquennial Catalogue in the list of the Class graduating four years from the time he entered. In the report of Dean Briggs for 1902–03, the following passage relates to this matter: "The new provision seems in every way admirable. By means of it students may receive the degree when their work for it is done, and still preserve what many value most — official recognition of their social association with the Class of their undergraduate life."

It is obvious from this review that much progress has been made towards establishing three years of residence for the Bachelor's degree as the normal period; but that Harvard College has never reaped, and is not now reaping, the benefits which would come from a statutory recognition of three years as the normal period of residence for the degree of A.B. or S.B. Although ample demonstration has been given that any student of respectable capacity can take the degree of Bachelor of Arts (or Bachelor of Science since 1906) in three years, meeting all the course requirements for the degree, many students still prefer a residence of four years, chiefly for social or athletic considerations.

The establishment of the Graduate School of Applied Science and of the Graduate School of Business Administration, each with a normal course of two years, affords new reasons for making the normal course for the degree of A.B. or S.B. only three years long. Graduates of these two schools who entered Harvard College at eighteen will be twenty-three before they take their professional degrees. In the scientific professions, and in business, twenty-three is old enough to begin to acquire the superior training which real service in the productive industries and the earning of the livelihood can give.

Still another urgent consideration favors the immediate establishment of three years as the normal residence for the first degrees. The American universities and colleges, with the exception of Harvard University, are offering to cut short the college course in favor of the professional course, by counting professional courses toward the degree of Bachelor of Arts or Bachelor of Science. In

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other words, they are offering to count one year of study, or even two years, towards two degrees, the Bachelor's degree and also the professional degree. This policy merely cuts off the Senior year, or the Senior and Junior years, from the college course. Its object is to diminish the number of years required for the sum of college and professional school training. On the other hand, the policy which Harvard University has been pursuing slowly during the last twenty years may be briefly stated as follows: Let the Bachelor's degree in Arts or Science be obtainable in three years, but without lowering in the least the existing requirements for the degree of A.B. or S.B. Let the college do everything it can to raise the whole standard of intellectual activity and ambition throughout boyhood and youth. Let the professional schools admit only persons who already hold a Bachelor's degree; and let there be no admixture whatever of the college course with the professional course, except as a prudent student who knows what profession he is to follow, may take in college, under the elective system, courses preparatory to his professional studies.

The result of this scheme would be that graduates of the Schools of Applied Science and Business Administration would be ordinarily ready to attack their life-work at twenty-three, graduates of the Divinity and Law Schools at twenty-four, and graduates of the Medical School at twenty-five. These ages of graduation seem reasonable as regards both the interests of the young men and the interests of society. Under this scheme it may reasonably be expected that the American college will continue to live and to serve a high purpose. Under the existing practice of other American colleges and universities it is only reasonable to anticipate that the American college will be destroyed, unless the professional schools come to its defense, and gradually enforce the previous attainment of a Bachelor's degree as one of their own requirements for admission.

Two measures are essential to the successful execution of the Harvard scheme, namely, a gradual reduction in the age of admission to college, for that age is still above the limit of eighteen years, though it has somewhat declined in recent years; and secondly, the reduction of the normal residence for the degree of Bachelor of Arts or Bachelor of Science to three years. By

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advancing these measures the Faculty and the Governing Boards can contend against the present waste of time in both schools and colleges, promote the use of a large part of the summer vacations for work contributory to the winning of the degree, particularly for laboratory and field work of many kinds, preserve the American college, and bring earlier into their professions the best-trained young men. The advance of Harvard University towards the execution of this comprehensive scheme has been slow; but it may be hoped that it has also been sure. At any rate, no backward step has ever been taken.

The University now finds itself in a position of extreme isolation, which has checked its growth as regards numbers, and checked the expenditures of the Corporation for intellectual objects. A frank adoption of the three years' programme for the Bachelor's degree ought to increase the resort of students to the undergraduate departments; because important family economies would result therefrom, and the saving of one year of time in entering professional life. While these economies would be effected, the training which each individual student received would surely be a better training than that now given, because it would be more continuous and more strenuous. The present standard of labor for many lazy and unambitious young men who spend four years in Harvard College is deplorably low, or, in other words, the standard which the College itself sets for mere pass work is so low that it can hardly be said to call for labor in any proper sense. The words of Dean Hurlbut on this subject (p. 109) are not exaggerated, — "nowhere except in a college would the work which produces 'the requisite number of C's' . . . be tolerated from youths of equal age and endowment." It should be observed, however, that the same is true of Oxford and Cambridge in England, and of American colleges in general. The adoption of three years as the standard residence, without any lowering of the present requirements for the first degree in course examinations, could not but raise the standard of labor during college residence.

In February, 1908, the standing rules of the President and Fellows and the Board of Overseers concerning the Committee on the Regulation of Athletic Sports were amended by substituting the

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words, "Three members of the Faculty of Arts and Sciences appointed by the Corporation with the consent of the Overseers," for the words, "The Dean of the Faculty of Arts and Sciences, the Dean of Harvard College, and the Dean of the Lawrence Scientific School." This was a return to the method of constituting this part of the Committee which existed prior to March, 1907.

The Faculty expressed itself strongly in favor of a considerable reduction in the schedules of intercollegiate contests in the year 1908–09, now current, after receiving a communication on this subject from the Association of Colleges in New England. Thus far in the current academic year (January 1, 1909) no significant reductions in the number of intercollegiate contests have been made by the Committee on the Regulation of Athletic Sports, the body which approves the schedules prepared by the managers or captains in the several athletic sports. The Corporation, the Board of Overseers, and the Faculty have all expressed themselves forcibly on this question; but thus far without appreciable result. Small reductions have, however, been made lately in the schedules for the winter sports, and some reduction in the base-ball schedule for next spring is anticipated, but not yet announced.

Some appreciable improvement was made during 1907–08 in Harvard athletics. The appointment of a Graduate Treasurer of the Harvard Athletic Association was a relief to the Committee, and particularly to its Chairman, and provided a more continuous and comprehensive supervision of all the sports. Mr. Garcelon's general view, that the object of college athletics is to promote the physical welfare of all the students as well as the intense development of a few, exerted a wholesome influence. In the preparation of players for the most strenuous competitive games greater discretion was displayed than ever before, inasmuch as excessive exertions were better guarded against, a larger number of good players were developed in the principal sports, the resources of the best players were better husbanded in the sports in which overwork, exhaustion, and injuries are most likely to occur, and individual talent was better utilized. The spoiling of good personal material before the principal events was not so much in evidence, and the notion that

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athletic sports ought always to yield pleasure and healthful vigor instead of grinding, unenjoyable work and injurious exhaustion, seemed to find more acceptance with the undergraduates actively engaged in the various competitions. It was understood by the undergraduate body that the best crews on the river enjoyed their work throughout the season, and that their effective training was not allowed to be either irksome or in any way harmful. Although the training of the crews was more prolonged than usual, they came to the principal races in prime normal condition.

In base-ball and foot-ball the amount of time devoted daily to these games by the principal players is altogether too great, and in foot-ball the training is so fatiguing, that the good players have little vitality left for intellectual labor during the season. Towards diminishing these exaggerations little progress, if any, was made during the year 1907–08. Although the game of foot-ball has been made more open and interesting by the new rules, and some of the former foul play has been prevented by the neutral strip and other devices, the game still remains unfit for college uses, affords a demoralizing spectacle for the immense crowds which gather to witness the chief games, and still provides on a great scale the opportunity for that variety of gambling called betting. The betting evil is greatly increased by the practice of exhibiting the game in public halls in many American cities far remote from the scene of action. The popular excitement over foot-ball games is spread and maintained for commercial purposes by newspapers, transportation companies, and hotels, which reap a considerable profit from these assemblages, since the public is prepared to spend large sums of money in order to witness these exciting contests. The betting evil might be reduced by preventing the transmission of the events and course of the game to other places by telegraph or telephone, and this measure is quite within the power of the owners of the fields where the games are played. As a rule, the undergraduate players in intercollegiate games have no interest in, or desire for, the flare and glare; and it may, therefore, be hoped that these offensive features of American intercollegiate sports will in a few years have disappeared.

The English schools and universities have never been afflicted with these vulgar evils in connection with their athletic games; and their wholesome habit of universal out-of-door exercise is

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maintained quietly and firmly without any such adventitious excitements. It is reasonable to expect that the barbarous stage of public opinion and college opinion concerning athletics, which in this country has been partly the result of inexperience in competitive sports, and partly of the general predisposition to exaggeration in pleasures which characterizes Americans, will pass away before many years. Meantime the educated public may rejoice in the greater attention generally paid to school hygiene, preventive medicine, daily out-of-door exercise, and moderation in eating and drinking, with the great resulting improvement in the health and vigor of young men and women at the student age.

The report on the Graduate School of Arts and Sciences for the academic year 1907–08 (p. 122) has been prepared by the Secretary of the School, Mr. George W. Robinson, because of the lamented death of the Dean of the School, Professor John H. Wright, in November last. The growth of the Graduate School during the last twenty years has been highly satisfactory, because solid and tolerably steady. The whole number of students in the year 1907–08 was more than four times as large as the corresponding number of twenty years ago, and there have only been three slight checks in this progress. During this satisfactory development three restrictive measures have been adopted which have eliminated successively three undesirable features of the organization, — undergraduate degrees are no longer given in the School, the Master's degree is no longer granted for work done while the candidates were enrolled as undergraduates, and the Master's degree can no longer be obtained by professional students who work wholly under other Faculties.

The departments which attract the largest number of students are, and have been, ancient languages, modern languages, history and political science, and philosophy (Table III, p. 127, and Table IX, p. 131). It is a curious fact, which may be deduced from Tables VIII, IX, X, and XII, that all the scientific subjects taken together, including mathematics, have not enlisted so many students as the modern languages, or the division of history and political science. Even in the highest ranges of its instruction — and still more at the elementary stages — Harvard instruction in the Arts and Sciences is chiefly devoted to the languages, history,

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political science, and philosophy. The conception that a modern endowed university must be chiefly devoted to the physical and natural sciences and their applications is as yet without foundation.

Mr. Robinson points out clearly and in detail the sources whence are derived students for the Graduate School; and he makes several classifications of the students who have been, and are, members of the School. As a rule, the first-year students outnumber all the other students in the School added together. Again, for the last four years more than half the students held no Harvard degree, whereas in the years from 1895 to 1904 a decided majority of the students held a Harvard degree. In Table XIII will be found an interesting statement of the birthplaces of graduate students, showing that the percentage of students born in New England has declined from forty-four to thirty-one during the last thirteen years. From three-fifths to three-quarters of the degrees conferred in this School are Masters' degrees, for which only one year of residence is required by statute.

The progress of the Graduate School of Arts and Sciences is all the more satisfactory because it charges a considerable tuition-fee ($150) and collects a tuition-fee from every student. All holders of scholarships and fellowships pay the tuition-fee; so that the income of the School from fees is a substantial one — nearly $50,000 in the year 1907–08 (p. 143). The progress of the School is due not to its cheapness for the individual student, or to any large competitive distribution of scholarships, fellowships, and other aids, but to the learning and efficiency of its teachers, to its large facilities as regards libraries, laboratories, and collections, and to the general prestige of the University.

The Secretary gives (pp. 146–148) a forcible description of the increased resources needed for the adequate development of this department of the University. Intimate acquaintance with the students of the School for eleven years past has given him clear views concerning the most urgent needs of the School and the best directions for the expenditure of money on its behalf.

An interesting consequence of the development of the Graduate School of Arts and Sciences is exhibited in the following list of universities, colleges, and technical schools, the presidents of

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## UNIVERSITIES, COLLEGES, AND TECHNICAL SCHOOLS

THE PRESIDENTS OF WHICH HOLD DEGREES FROM HARVARD UNIVERSITY, EXCLUDING HONORARY DEGREES

| Institution. | Place. | Harvard degree. |
|---|---|---|
| University of Arizona, | Tucson, Arizona, | A.M. 1895, Ph.D. 1896. |
| Colorado School of Mines, | Golden, Colorado, | A.B. 1885. |
| American University, | Washington, D. C. | A.B. 1887. |
| John B. Stetson University, | De Land, Florida, | A.B. 1889. |
| University of Florida, | Gainesville, Florida, | A.M. 1896. |
| McKendree College, | Lebanon, Illinois, | LL.B. 1861. |
| Lincoln College, | Lincoln, Illinois, | A.M. 1901. |
| Goshen College, | Goshen, Indiana, | A.M. 1903. |
| Butler College, | Indianapolis, Ind. | A.M. 1897, Ph.D. 1899. |
| Bowdoin College, | Brunswick, Maine, | A.B. 1879. |
| Clark University, | Worcester, Mass. | Ph.D. 1878. |
| Hamline University, | St. Paul, Minn. | M.D. 1881. |
| *Washington University, | St. Louis, Mo. | A.M. 1892. |
| University of Montana, | Missoula, Montana, | A.M. 1894, Ph.D. 1897. |
| †Brooklyn Institute of Arts and Sciences, | Brooklyn, N.Y. | A.B. 1875, A.M. Hon. 1897. |
| Polytechnic Institute, | Brooklyn, N.Y. | A.B. 1890. |
| Elon College, | Elon College, N.C. | A.M. 1893. |
| Adelbert College, Western Reserve University, | Cleveland, O. | A.B. 1876. |
| Oberlin College, | Oberlin, O. | A.M. 1883. |
| Albany College, | Albany, Oregon, | S.T.B. 1896. |
| University of Oregon, | Eugene, Oregon, | A.B. 1886. |
| Geneva College, | Beaver Falls, Pa. | A.B. 1902. |
| Haverford College, | Haverford, Pa. | S.B. 1873. |
| University of Texas, | Austin, Texas, | A.B. 1890, A.M. 1891, Ph.D. 1893. |
| Utah Agricultural College, | Logan, Utah, | S.B. 1894. |
| Washington State Agric. College, | Pullman, Wash. | A.M. 1893. |
| Oahu College, | Honolulu, Hawaii, | A.B. 1899. |
| *Liceo College de Manila, School of Engineering & Architecture, | Manila, P.I. | S.B. 1904. |
| †University of New Brunswick, | Fredericton, N.B. | A.B. 1898. |

* Director. † Chancellor.

DEGREES HELD BY THE ABOVE PERSONS

| | | | |
|---|---|---|---|
| A.B. | 12 | A.B., A.M. | 1 |
| S.B. | 3 | A.M., Ph.D. | 3 |
| A.M. | 12 | A.B., A.M., Ph.D. | 1 |
| Ph.D. | 5 | | 5 |
| S.T.B. | 1 | | |
| LL.B. | 1 | | |
| M.D. | 1 | | |
| | 35 | | |

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which hold degrees from Harvard University. From this list Harvard University and Radcliffe College are omitted. The twenty-nine presidents of the institutions on this list hold thirty-five Harvard degrees; seventeen of these persons graduated since 1890, of whom four have graduated since 1900; six others graduated in the 80's, five in the 70's, and one in the 60's; all but one, therefore, have graduated since the Graduate School of Arts and Sciences was established, and seventeen out of the twenty-nine are presumably men under forty years of age. Of the institutions named in the list, eight are state institutions supported by taxation; but the rest are endowed institutions, among which nine or ten might fairly be called denominational, though not to an intense or highly exclusive degree.

In the first half of the nineteenth century it was almost unheard of that a graduate of Harvard University should be elected to preside over any other institution of higher education. That such invitations should now have become common, marks a great change, first, in the function of Harvard University, and, secondly, in the relation of Harvard University to other American institutions of higher education. There will be found in the Appendix, p. 345, another list of the same institutions, which gives the names of the presidents, and the degrees which the presidents hold.

On the 28th of October, 1907, on the recommendation of the Faculty of Arts and Sciences, the President and Fellows voted, "That the four-year programmes in the Lawrence Scientific School be withdrawn except for students now enrolled in the University." Students who entered the School in June, 1907, and all those who entered the School earlier, will be entitled to follow these four-year programmes; but after the graduation of the students who selected these programmes in the year 1907–08 — about twenty-two in number — these programmes will cease to be maintained. The vote of the Corporation was transmitted to the Board of Overseers for their information, since it marked another stage in the execution of the votes adopted in March, 1906, by both the Corporation and the Board of Overseers for reorganizing the University's work in applied science. The earlier steps in this reorganization were described in the President's Report for 1906–07, pp. 29 and 30.

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At the same time the Corporation transferred to Harvard College four normal school scholarships which had previously been used in the Lawrence Scientific School, to be there assigned to graduates of normal schools who are candidates for the degree of either A.B. or S.B. The Board also assigned to the Graduate School of Applied Science fellowships and scholarships in Architecture, Landscape Architecture, Zoölogy, and Geology, which together had a total income of $4,550, and also voted that until the further order of this Board, five endowed scholarships with an annual total income of $1,250, and eight University scholarships, of $150 each, shall be open until the further order of the Board to students in the Lawrence Scientific School, and also to students in the Graduate School of Applied Science. These steps were taken in execution of the previous votes of the Corporation and Board of Overseers to transfer to Harvard College candidates for the degree of S.B., and to establish a Graduate School of Applied Science.

On the 13th of January, 1908, the Corporation received from the Trustees of Andover Theological Seminary a plan providing for the removal of the Seminary to Cambridge, and its affiliation with Harvard University. This plan having been referred to the Faculty of Divinity for their consideration, there followed from the discussions in that Faculty, both formal and informal, certain emendations of the proposed plan which were in turn discussed with representatives of the Seminary Trustees. This study of the original plan resulted in the adoption of some acceptable amendments which did not, however, affect materially the substance of the proposal.

On the 24th of February, 1908, the President presented to the Corporation a "communication from the Trustees of Andover Theological Seminary proposing the removal of the Seminary to Cambridge, and its affiliation with Harvard University in accordance with the following plan upon which the action of the Governing Boards of the University was invited." (App., p. 347.) Whereupon it was "Voted, that the foregoing plan for the removal of Andover Theological Seminary to Cambridge, and its affiliation with Harvard University, be adopted on the part of the Univer-

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sity." This vote was communicated to the Board of Overseers, and was consented to by that Board in due course. The Corporation fully believe that the result of this action will be "to combine the resources of instruction in both institutions in an economical, harmonious, and comprehensive scheme of theological education." The removal of the Seminary to Cambridge has been begun; but will not be fully accomplished until the Trustees of the Seminary have had time to erect near the Divinity School a building for the use of the Seminary. They propose to buy for this purpose the large lot of land which adjoins the site of the Divinity School Library.

The Dean of the Law School points out that the entering class is smaller by forty than the entering class of last year, and that the entering class contains forty-three fewer Harvard graduates than the entering class did last year. The maximum number of students in the Harvard Law School was reached in 1904–05, while the maximum number of Harvard graduates in the Law School was attained in 1905–06. In comparison with these two maxima the total number of students in the Law School has fallen off seventy-seven, and the number of Harvard graduates thirty-nine. These results are probably due to the increasing attractiveness of business and applied science careers, although the adverse difference between the current year and the year 1907–08 may be due in part to the establishment of the Graduate School of Business Administration, and to the depression of business.

The Law School has been remarkably successful in utilizing marks or grades as a legitimate stimulus to exertion, and as means of assigning scholarships and awarding honors, without introducing among the students any exaggerated competitive motive, or burdening the teacher with unnecessary examination work, or with disputes with individual students over marks or grades. The examination and marking method used in the Law School is, therefore, worthy of attention in all the other Departments of the University.

Each examination paper contains ten questions, and each question is marked on a scale of ten. The examiner reports the students' marks in figures to the Secretary; and the Faculty

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attaches importance to the practice of marking in figures rather than in letters, believing that the report in figures induces greater care in marking, and gives greater accuracy than a report in letters. The Secretary finds the average mark of each member of a class in figures, and then sends to each student, on a carefully prepared blank (p. 349), his average mark on all the work of the year, and information that he has passed or failed in each subject. The exact average in figures is not communicated to the student, but only an approximate indication of his average expressed in four letters, A, B, C, and D, the meaning of which is explained on the printed blank. The interval between A and B was made small, so that a B man might be encouraged to try for an A the following year. The lower limit of D is the lowest passing mark, 55 per cent, so that a D man will know that he is near the danger line. No professor is permitted to give any information about his mark to any student; and no information is given as to the marks in particular subjects beyond the statement "passed" or "failed," lest a professor's reputation as a high or low marker might become a factor in the student's choice of electives.

Experience has proved the wisdom of prohibiting all discussion of marks between professor and student, except in the case of a student who is conditioned. In the thirty-seven years since examinations were introduced, although many books of conditioned men have been re-read on request, no mark has ever been changed. From the Secretary's records scholarships are awarded with ease and accuracy, and the honor degree is conferred without debate or contest.

The Law School has also dealt successfully with the class of Special Students, having formed from this group of irregular students a category to which men of high merit and great earnestness in work are satisfied to belong. The rules for admission of Special Students to the Law School in their present form went into effect in the year 1901–02. Under these rules Special Students are of three sorts: — (1) Students entering as specials, whose attainments at the time of entrance were such that they might have entered as regular students of the first year. (2) Students registering as specials from necessity, but holding a degree from

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a law school or a college not on the approved list. (3) Students holding no degree who were admitted upon examinations in French, Latin, and Blackstone's Commentaries.

In the following Table the letters A, B, and C are used to designate these three sorts of Special Students. The Table shows the number of each sort of student for eight years, and the number who ultimately obtained the degree of LL.B. To

| Year. | A. | | B. | | C. | | Total. | |
|---|---|---|---|---|---|---|---|---|
| | Number entering. | Taking LL.B. | Number entering. | Taking LL.B. | Number entering. | Taking LL.B. | No. | LL.B. |
| 1901 | 10 | 1 | 15 | 2 | 2 | 1 | 27 | 4 |
| 1902 | 18 | 5 | 3 | 2 | .. | .. | 21 | 7 |
| 1903 | 13 | 1 | 9 | 2 | 4 | 1 | 26 | 4 |
| 1904 | 19 | 1 | 5 | 2 | .. | .. | 24 | 3 |
| 1905 | 12 | 2 | 3 | .. | 1 | .. | 16 | 2 |
| 1906 | 18 | .. | 17 | 4* | 1 | 1* | 36 | 5* |
| 1907 | 16 | 4* | 10 | 2* | 1 | 1* | 27 | 7* |
| 1908 | 8* | .. | 7* | .. | 2* | .. | 17 | .. |
| | | | | | | | 194 | 32 |

* At present in the School. They have not yet taken the degree but some of them are on the road to it.

obtain a degree, Special Students must obtain an average mark for the entire course within five per cent of that demanded for the honor degree.

The rule regarding entrance of Special Students passed in 1893, and taking effect after Commencement Day, 1896, was in general

| Year. | A. | | B. | | C. | | Total. | |
|---|---|---|---|---|---|---|---|---|
| | Number entering. | Taking LL.B. | Number entering. | Taking LL.B. | Number entering. | Taking LL.B. | No. | LL.B. |
| 1896 | 12 | 1 | 18 | 3 | 4 | 1 | 34 | 5 |
| 1897 | 6 | .. | 13 | 2 | 7 | 1 | 26 | 3 |
| 1898 | 12 | 5 | 12 | 1 | 6 | 2 | 30 | 8 |
| 1899 | 15 | 1 | 14 | .. | 6 | 2 | 35 | 3 |
| 1900 | 17 | 5 | 13 | 1 | 4 | 1 | 34 | 7 |
| | | | | | | | 159 | 26 |

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similar to the present rule; but since 1901 applicants for admission as Special Students must satisfy the Law Faculty, before being permitted to take the examinations, that they are likely to be able to carry on successfully the work of the School. Under the present rule probably fifty per cent of those applying for permission to take the examinations are not allowed to do so. The second Table gives the figures for Special Students who entered in 1896 and 1900 inclusive. A, B, and C designate the same sorts of men as in the preceding Table.

The Faculty of Medicine, after full discussion, took action in regard to the Dental School, which is completely set forth in the following communication to the President and Fellows: —

"At a meeting of the Faculty of Medicine, December 21, 1907, the following motions were adopted by a yea and nay vote of 26 to 4, three members of the Faculty not voting: —

"1. That the Faculty recommend to the Corporation that the amount due from the Massachusetts General Hospital on the removal of the Dental School from the building in North Grove Street, and an additional sum of forty thousand dollars ($40,000) from the allotment of the Billings Fund to the Medical School Undertaking, be loaned to the Dental School for the erection of a suitable building.

"2. That until required by the Medical School for its own purposes, such unoccupied space in the Medical School Buildings as shall meet the needs of the Dental School be set apart for instruction in Dental Medicine."

The President and Fellows gladly accepted the suggestions of the Faculty of Medicine, reserving the question to what fund the loan of $40,000 shall be hereafter charged. The Dental School will probably be able to move from North Grove Street to its new building not far from the beginning of the next academic year, the construction of that building having been begun last summer. This action of the Faculty of Medicine means that the Faculty proposes to actively support the Dental School in its endeavor to improve the education of dentists, and to raise the standard of the Dental degree in Harvard University, and, in general, to recognize the fact that the dental profession is rising in serviceableness and in the estimation of the community, and is taking active part in advancing school hygiene and preventive medicine.

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The free public lectures on medical subjects which were first given in 1907 were continued in 1908 at the Medical School buildings in Boston on Saturday evenings at eight, and on Sunday afternoons at four, beginning January 4, and ending April 26. Many of the lectures were thronged, and it was sometimes necessary to exclude hundreds of persons who desired admission. It cannot be doubted that this series of lectures on interesting medical subjects is welcomed by eager auditors, and is diffusing through the community much useful knowledge on medical and surgical subjects. The lecturers all give their services with much satisfaction, because of the obvious public serviceableness of the entire course.

The year was a memorable one for the Dental School. When the Faculty of Medicine advised the President and Fellows to advance the sum of $80,000 from Medical School resources for the use of the Dental School in erecting and equipping a new building, the Committee of the Dental School found it possible with this encouragement to raise a large additional sum towards the cost of the building; and in August last the President and Fellows awarded the contract for a building having a frontage of 77 feet on Longwood Avenue, and extending back on Wigglesworth Street 172 feet. This building is to be equipped for hospital purposes only, and will provide for a maximum number of 250 students. It will be connected by a subway with the buildings of the Medical School, where all the instruction of the Dental School will be given. At the Dental Alumni dinner last June, the members present pledged to the Dental School on or before the first of July, 1909, the sum of $30,000. The graduates of this School have always given it cordial support, and this support has now taken the form of money contributions, large in proportion to the incomes of the givers.

On the recommendation of the Administrative Board of the Dental School the Corporation substituted the term "prosthetic" dentistry for "mechanical" dentistry in the titles of teachers in the Dental School. The word "prosthetic" in connection with either surgery or dentistry indicates the addition of an artificial part to the body, as a leg or arm in surgery, or in dentistry a palate or a bridge of teeth between two crowns. The appearance

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in large cities of dental laboratories, in which skilled mechanics make on prescriptions or moulds sent in by dentists the various mechanical devices for replacing natural teeth, led the teachers of dentistry to propose this change in Dental School titles. In cities the actual making of the teeth, plates, crowns, and bridges, of which artificial dentistry makes use, is apparently to cease to be a part of the actual work which the dentist does with his own hands. The dentist is going to rely on a skilled mechanic for this work, just as the orthopedic surgeon relies on skilled mechanics to make the apparatus required for the treatment of his patients.

The year 1907–08 was the last year in which undergraduate students were received at the Bussey Institution. Those students who desired to continue the course for which they had entered the Institution were transferred to Harvard College, where they were admitted as special students, each with a rating of his own. With the exception of Mr. Benjamin M. Watson, there were no instructors at the Bussey who held an appointment for a term longer than one year; so that six instructors, all of whom had rendered faithful service for several years on annual appointments, ceased to be connected with the University on the first of September, 1908. The President and Fellows regretted very much that the transfer to Cambridge of the undergraduate work heretofore done at the Bussey Institution inevitably left these gentlemen without employment at the University; for the Bussey students who pursued their studies joined classes at Cambridge which had been long in operation. Mr. Watson is giving this year at Cambridge some of the same instruction which he formerly gave at the Bussey Institution; because instruction in horticulture had not previously been given in Harvard College.

It is proposed that the resources of the Bussey Institution — land, buildings, and endowment — shall hereafter be devoted to advanced instruction and research in four subjects of applied science which are of fundamental importance in agriculture, horticulture, and arboriculture, namely, economic entomology, plant breeding, animal breeding, and comparative pathology. Dr. Theobald Smith, Professor of Comparative Pathology at the Medical School, has for some years made use of Bussey resources in prosecuting his researches on animals' diseases, and on the

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relation of diseases in animals to diseases in men; and it is hoped that he will now make further use of Bussey resources. Dr. Smith also supervises the work done for the State Board of Health at the Bussey Institution in the preparation of the diphtheria antitoxin and the vaccine which are distributed gratuitously by the Commonwealth.

On the 23d of March, 1908, William Morton Wheeler, Ph.D., was elected Professor of Economic Entomology to serve from September 1, 1908. During the summer, laboratories were fitted up for him in the Bussey building on the Plain Field; and he entered on his duties at the opening of the current year. A part of the instruction he offers is given in Cambridge. His researches will be conducted at the Bussey Institution. The arrangements for carrying on advanced instruction in plant breeding and animal breeding have not yet been perfected; because they require a considerable sum of money per year in addition to the moderate income from the Bussey endowment.

Before entering on this reorganization of the Bussey Institution as a department of the new Graduate School of Applied Science, the Corporation took legal advice with regard to the conformity of the proposed plan of instruction to the directions given in Mr. Bussey's will, and received the following advice from Professor John C. Gray: —

"Considering the condition in which Woodland Hill was left by the testator, and the language of his will directing 'instruction in practical agriculture, in useful and ornamental gardening, in botany, and in such other branches of natural science as may tend to promote a knowledge of practical agriculture and the various arts subservient thereto and connected therewith,' I have no doubt that the proposed plan complies both with the letter and the spirit of the testator's gift. The instruction proposed is eminently 'practical,' and to insist upon using 'agriculture' in a sense so narrow as to exclude the objects for which the instruction is planned seems to me quite inadmissible."

One of the most interesting undertakings of the year 1907–08 was the establishment of a Graduate School of Business Administration, to which the ordinary requirement for admission shall be the possession of a Bachelor's degree, and for graduation, a course of study covering two years. The vote establishing this School was adopted by the Corporation on March 30, 1908. Edwin F. Gay, Assistant Professor of Economics since 1903, and Professor

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since 1906, was chosen Dean of the new School, and gave much time from April onward to planning the instruction to be given in the new School, and to procuring its teachers. An adequate income for the School for the term of five years had previously been secured, $12,500 a year being given by the General Education Board of New York City, and a like sum being contributed by friends of the University who took a strong interest in the new project. The tuition-fee in the School was fixed at $150, without charge for additional courses. Quarters for the new classes were furnished by Harvard College, and space was assigned in Gore Hall for a special collection of books brought together for the benefit of its students. The degree to be given by the School is Master in Business Administration, and the diploma is to be written in the English language.

The instruction will cover in the first year such general subjects as principles of accounting, commercial law, recent economic history, commercial organization, and economic geography. In the second year more specialized instruction will be offered in banking, transportation, insurance, and business organization and management. In addition to the courses which the student will choose because they prepare specifically for his own career in business, there will be certain elective studies, among which a student will have a choice, including especially courses in the modern languages for business purposes. The School is primarily designed to meet the needs of those who desire to fit themselves thoroughly for the ultimate attainment of posts of responsibility and leadership in the business world; but it is hoped that in some directions it may also serve the increasing number of men who seek service in the government bureaus, or in the consular service.

The question whether the School should be made completely independent with a Faculty of its own like the Divinity School or the Law School, or be placed under the direction of the Faculty of Arts and Sciences, was thoroughly considered during the spring, and in May was settled for the time being, by the following vote of the President and Fellows: "That until the further order of this Board the Graduate School of Business Administration be coördinated with the Graduate School of Arts and Sciences and the Graduate School of Applied Science, as a department under the Faculty of Arts and Sciences."

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Owing to the length of time required to bring together the teaching staff of the School it was impossible to issue the announcement of the School before mid-summer. The number of students registered at the opening of the academic year was 53, a number entirely satisfactory under all the circumstances. The general project, although novel, has commended itself very much to both the educational and the business world; and it is apparent from the increased choosing for the current year of courses in economics that a considerable number of undergraduates are preparing to become members later of the Graduate School of Business Administration. A list of the courses of instruction offered in this School during the current academic year, with the names of the instructors, will be found on pages 154, 155.

In the President's Report for 1871–72, p. 33, the following passage occurs: —

"The cultivation and preservation of forests will become, in no long time, a matter of national concern. The natural forests of the country are rapidly disappearing, and wood will, at no distant day, be a scarce and dear commodity, as it has long been in many countries of Europe."

It was more than thirty years afterward that the first appointment of a teacher for forestry was made in Harvard University, that of Mr. Richard Thornton Fisher to be Instructor. This appointment was followed the same year by the appointment as Instructor of Forestry of Mr. John George Jack, for many years an assistant in the Arnold Arboretum. Two years later Mr. Fisher was made Assistant Professor, and later in the same year Mr. Austin Cary (A.M. Bowdoin) was also appointed Assistant Professor of Forestry. The instruction was given in Cambridge, chiefly in Nelson Robinson Jr. Hall, with excursions to see actual lumbering operations, and to perform the usual operations of a forester in estimating the value of forest lands, or of particular stands of merchantable timber. Under these circumstances the instruction was given under considerable difficulties, the amount of field work being insufficient. On October 14, 1907, the new department was supplied with invaluable means of teaching, by a gift of $60,000 from Mr. John S. Ames of North Easton, to be used as follows: "The sum of $55,000 for the purchase of a tract

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of wood land to be used by the University as a forest reservation, this tract being 1,788 acres of wood land in Petersham, Mass., now owned by Mr. James W. Brooks," and "the additional sum of $5,000 to be used towards the purchase of equipment, and for the repairs of buildings in Petersham, to be used by the forestry school." Mr. Brooks had gradually acquired three large tracts of forests, all of which except a few acres lay within the town of Petersham; and he had built about fifteen miles of good wood-road, which made the tracts accessible to the public, and also gave access to almost any portion of the tract for logging purposes. In order to preserve this forest, and to render it useful both to the town of Petersham and to the cause of forestry, Mr. Brooks offered it to the University at a price substantially below its commercial value. At the same time seven owners of adjoining land, of whom Mr. Brooks was one, gave contiguous holdings amounting to two or three hundred acres.

Mr. Ames's generous gift has placed the instruction in forestry on a high level of efficiency. The forest tracts, with the buildings which stand thereon, serve the students as laboratory, and means of residence. The forest furnishes the students with the opportunity to observe woods in all stages of economic value, and to perform with their own hands the operations of the forester and lumberman.

The Harvard forest will also be utilized to demonstrate the way to use a forest for a durable annual crop, without deforesting the tract at any stage. In order to give this demonstration, the annual product of the forest must be sold; but the proceeds of these sales will all be used in teaching, none of them being withdrawn from the public uses of the department. The accounts of the forest must, however, be kept in a manner which will show the annual yield of the tract, so that the School may demonstrate to the ordinary owner of a wood-lot how he may most advantageously use it without ever stripping the lot.

During the past generation the American public has been brought to a realization of the importance of forests, not only as sources of permanent supplies of lumber, but as means of storing the rain-fall, and preventing or mitigating both floods and droughts. The public is now prepared to understand the value of schools of forestry, and of the forester's profession.

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The attention of the Overseers is invited to the report of the Chairman of the Division of Forestry, Professor Fisher (p. 244), a report which appears for the first time in the President's annual report. The Overseers will perceive that an important addition has been made to the resources of the University, and to the means of out-of-door practice work on the part of the students under highly advantageous conditions.

Since the completion last year of the valuable addition to Gore Hall on its northeastern side, the most urgent need of the Library is an addition to its stacks; for more stack-room is necessary before the desirable classification of the books according to subject can be carried further in an economical and permanent manner. The best means of obtaining additional stack-room would be to extend the main building of the original Gore Hall about 72 feet to the south on the same axis and with the same width. This enlargement could be made without interfering with the continuous use of the building in any department, and the gain in stack-room would be nearly one-half of the present stack in that part of Gore Hall. The second story of the addition would be arranged precisely as proposed in the original plans of Professor H. Langford Warren for the enlargement of the Library building. The additional building would be constructed just as proposed in Professor Warren's complete plan, except that the lower story of its western wall would have to be finished somewhat better than would be necessary if the ultimate one-story lean-to against it should be simultaneously built. A rough estimate of the cost of this addition, with stack and furniture, is from $100,000 to $120,000, the material being concrete blocks, such as were used in the northeastern addition finished last year. It would be expedient to remove the present towers and pinnacles on the south end of Gore Hall, and to shorten and otherwise improve the pinnacles on the north end at the same time. If, therefore, any friend, or group of friends, of the Library desires to provide for its most urgent present need, the way is open to do so on a sound, permanent plan, with the least possible interruption of the daily work of the library, and at a moderate cost. The present reading-rooms and work-rooms seem to be sufficient. (See the Librarian's report, pp. 193–224.)

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In the University as a whole the summer instruction has assumed great importance. The summer courses of instruction in 1908 were attended by 1,328 persons, distributed as follows: in Arts and Sciences, 957; in Theology, 66; in Medicine, 136; in Dentistry, 14; in Engineering, 140; in Mining, 15.

The first summer courses in Harvard University were instituted in 1871. Since that date more than 12,000 persons have been members of the Summer School of Arts and Sciences, of whom 5,740 have attended the School in the last eight years. Sixty-six per cent of the entire attendance have been teachers in service, and fifty-five per cent have been women. It is of great service to teachers in elementary, secondary, normal, and technical schools, or in colleges and universities, and to school principals, supervisors, and superintendents. It is also used by competent persons who intend to offer the work ultimately in partial fulfilment of the requirements for a degree, either at Harvard University or in some other institution of learning. The "plant" of the University is now actively used during the first seven weeks of the long summer vacation; the College Yard presents a lively scene during that period; and the laboratories, libraries, and collections are actively used. The summer instruction given at the Medical School is chiefly resorted to by practitioners to refresh, or bring up to date, their knowledge of some particular subject. The Summer School of Theology is a three weeks' course of lectures, given three a day. The course is shorter than any other except some of the medical courses; but it is always acceptable to a large group of enthusiastic students. The Engineering camp at Squam Lake is highly serviceable to the Division of Engineering, and is greatly enjoyed. The summer work of the Mining students (p. 290) is also both strenuous and enjoyable.

There is very little illness among the summer students, and still less evidence of exhaustion. The men who teach in the summer courses are usually able to get some vacation in June, and more during the last five weeks of the summer vacation. There has never been any evidence that this summer work is anything but wholesome for both teachers and students. At any rate, the summer work is continually increasing, and those who take part in it, with very few exceptions, express hearty satisfaction with it.

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The report of the Division of Mining and Metallurgy (p. 290) is unusually interesting because it describes the use of the South Mine of the Vermont Copper Company, during the summer of 1908, to give the students practical instruction in mining operations. This mine offered an excellent opportunity for carrying on the ordinary operations of practical mining, such as drifting, raising, stoping, sinking, timbering, track-laying, and pumping. The School supplied part of the necessary equipment; but the Vermont Copper Company furnished power, mine timber, dynamite, various tools, and other materials, and allowed the School the use of their teams and the services of their blacksmiths. A pleasant camp ground was occupied near a spring of good water, about half a mile from the mine. The young men slept in tents, and used a large tent for both dining-room and draughting-room. The fifteen students who enlisted for the course were divided into four squads, each squad devoting one-quarter of its time to each of the four general divisions of the work, namely, surveying, shaft-sinking, drifting including raising, and track-laying and timbering. The students also inspected and sketched the equipment of the modern mining plant operated by the Company and of their smelter. The students worked enthusiastically, and with real enjoyment.

Within a few years Harvard University has organized much practical instruction in useful arts and applications of science to productive industries. It has seen the way to contribute effectively, by a great variety of instruction, to the progress of the productive and constructive industries of the country, such as agriculture, forestry, mining, engineering, and architecture, and to train young men well for the occupations by which the people get their livelihood, and advance towards a more comfortable and a happier national life. This recent experience has demonstrated that the University, though its site is on the edge of the country, and in a region neither fertile nor rich in mines, can, nevertheless, procure within easy reach of its students all the necessary means of practical instruction in the great industrial and commercial arts. It is indeed well equipped for these purposes, and only needs in the future more money for annual expenditure to enable it to make advantageous use of its local opportunities and facilities. This development within recent years has not withdrawn

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the attention of the University from the reinforcement of its resources for training young men for the learned professions and for literature, the fine arts, and pure science.

In the illness report concerning the different schools of the University made by the Medical Adviser (p. 352), some curious differences between the different departments are clearly brought out. Thus in the College 159 cases of unclassified colds were reported; in all the other Cambridge departments only eight. One hundred and twenty members of the College suffered from general debility; but only three in the other departments combined. Fifty-two students in the professional departments reported themselves ill of the grippe; 389 College students were afflicted with the same disease. One hundred and thirty-nine College students were afflicted with miscellaneous diseases; but only twenty-three in all the other departments. Yet the number of students in the College was 2,279, and in the other Cambridge departments 1,210. There is no reason to believe that the College students were less vigorous and healthy than the others.

On October 28, 1907, the President having reported the rules adopted by the Carnegie Foundation for the Advancement of Teaching (p. 349) the Corporation adopted the following statement concerning the relation of the Carnegie Foundation pensions to the retiring allowances provided in Harvard University since March 27, 1899: "Whenever a pension granted by the Carnegie Foundation to an officer of Harvard University is less than the pension earned under the rules of the University, the former shall be applied toward the payment of the latter, and the balance paid out of the appropriate University funds. Whenever a pension assigned by the Carnegie Foundation exceeds the pension to which a Professor is entitled under the rules of the University, the former shall supersede the latter, and shall be so recorded by this Board."

Since the original adoption of the Carnegie Foundation rules an important change has been made in the sixth rule, which relates to the pension of a widow. The word "may" has been replaced by the word "shall," so that the widow of a Professor who has been receiving a pension is now entitled to one-half of the allowance which her husband received.

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It has long been the practice of the Corporation to pay to the estate of a deceased officer the full salary of the quarter during which the death occurred. This rule, however, has been found to work very unevenly, the estate of an officer who died near the end of the quarter receiving but a small posthumous payment, while the estate of an officer who died near the beginning of a quarter would receive a considerable payment. To remedy these inequalities the President and Fellows adopted in October, 1907, the following vote, "That hereafter and until the further order of this Board, the Treasurer be authorized to pay to the estate of a deceased officer of instruction or administration, whose salary has been paid quarterly, two months' salary in addition to the amount accrued up to the date of his death." This arrangement secures to the widow or heirs of a deceased officer a substantial extra payment at a time when many extra expenses have probably been incurred.

For the encouragement of a biological station in Bermuda, Harvard University and New York University together entered into an agreement with the Bermuda Natural History Society in May, 1903; and in each summer since, teachers from Harvard University have carried on in that delightful island a small school for advanced students, with the valuable coöperation of the Bermuda Natural History Society. After the English Government abandoned Bermuda for the most part as a military and naval station, the Bermuda Natural History Society came into possession of an island in Hamilton Harbor on which stood several government buildings which had formerly been used for a magazine and for the lodgings of the magazine guard. The possession of these buildings enabled the Society to establish a public aquarium, and to offer appropriate buildings on the island to any suitable group of American institutions which would undertake to carry on there a summer school of natural history. As a preliminary to the new organization, Harvard University and New York University dissolved, October 14, 1907, the agreement which had existed between them for something more than four years.

The Observatory has two urgent needs. The first is $5000 a year for five years, to complete the publication of astronomical material, which can be done now more economically and rapidly

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by those who have taken part in the work of observation and computation than later by persons who have had no part in that work. The second need is a fireproof building for the very valuable library of the Observatory. This need has been repeatedly presented by the Director; and his statement (p. 267) is reinforced this year by that of the University Librarian (p. 205).

The endowment of Radcliffe College in land, buildings, and money continues to increase; so that it may look forward with confidence to a stable and influential future. Nevertheless, the College stands in great need of a large fund, the income of which could be devoted to the salaries of teachers. Radcliffe could then secure from Harvard Professors and Instructors an independent portion of their time and thought, instead of obtaining, as now, only repetitions of courses primarily given for Harvard students. The organization of Radcliffe and its affiliation with Harvard have surely commended themselves to the educational public, as the growth of the institution during fifteen years past abundantly testifies.

An impression has prevailed widely that the teaching at Radcliffe College, although all done by Harvard teachers, is chiefly done by the younger Harvard teachers. This impression is entirely incorrect. In the year 1905–06, fifty-six Harvard teachers who were over thirty-five years of age gave 76½ courses in Radcliffe College to 1,092 students. In the same year thirty-three teachers who were under thirty-five years of age gave 36 courses to 555 students. Thirty-four full Professors in Harvard University took part in the Radcliffe work and twenty-two Assistant Professors. Of these Assistant Professors, eight have since been made full Professors. In other words, about two-thirds of the Radcliffe teaching was done by the older men of the Harvard Faculty. In 1907–08, thirty-three Professors gave 43 courses to 594 students; twenty-five Assistant Professors gave 30.5 courses to 411 students; twenty-nine Instructors gave 33 courses to 553 students; one Assistant gave 0.5 of a course to 23 students. Of all these teachers, only twenty were less than ten years out of college.

In the Semitic Museum the chief interest of the past year was the beginning of the excavations at Samaria. Excavation began on April 24, 1908, and was continued for about a week under the

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direction of Dr. George A. Reisner and Dr. Gottlieb Schumacher. In May, Professor Lyon arrived at Samaria. Certain local difficulties which had brought work to a standstill were temporarily overcome, and a second period of digging extended from May 22 to June 3, when further local difficulties arrested the work. Professor Lyon found means of overcoming these difficulties through the authorities at Beirut and Constantinople; so that a third period of digging (July 11 to August 21) passed without further interruption. The money available for the first year being then exhausted, the work was stopped. The total amount of time devoted to excavation was nine weeks.

There have been already uncovered many walls of buildings of different ages, a great stairway eighty feet broad, and a vaulted chamber partly cut in the rock, and partly enclosed by massive walls of masonry. At the foot of the stairway was a large Roman altar of stone, and near it was found the torso of a figure of heroic size, probably that of a Roman emperor. Well-preserved inscriptions found near the altar belong apparently to about the middle of the second century A.D. These discoveries, which illustrate chiefly the period of the Roman domination in Palestine, are interesting, and others of like character will probably reward further excavation. Hebrew remains are, however, the special object of search. Some massive masonry has been uncovered which seems to be Hebrew; but much further excavation will be necessary to settle the question whether valuable Hebrew remains underlie the Greek and Roman. Mr. Jacob H. Schiff, to whose generosity the University owes the opportunity to make these interesting investigations, has paid into the Treasury of the University $40,000, which is the unused balance of the sum he originally gave for the prosecution of explorations in Palestine, and has imposed no restrictions on the manner or rate of the expenditure.

The Gray Herbarium needs urgently a thoroughly fireproof building, fitted with metallic cases, and provided with well-lighted work rooms. The present building is far from fireproof, and is overcrowded. Moreover, its cases are not secure from insects. To plan and erect a suitable building for the Herbarium would be in itself a memorable achievement, which would secure for the future a collection into which have gone the life-works of many devoted men.

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The bequest of Mrs. Sarah E. Potter of Boston, to be used and applied for the benefit of the Gray Herbarium, and to be called the Sarah E. Potter Endowment Fund, secures to the Herbarium an assured and definite income, and will permit the development of the establishment in a manner appropriate to its large scientific usefulness. On August 1, 1908, this endowment amounted to $189,164.43. Mrs. Potter was for several years an interested member of the Overseers' Committee to visit the Gray Herbarium.

A report on Appleton Chapel and the Phillips Brooks House is now for the first time embodied in the President's Report (p. 225); and Professor Edward C. Moore has availed himself of this initial opportunity to review the experience of the University in conducting services of worship and teaching by a board of five preachers annually appointed from various Christian communions, and representing different parts of the country. This review will be found interesting and encouraging. All the facts of the case are frankly stated, in regard to both Appleton Chapel and Phillips Brooks House. Professor Moore is at once Chairman of the Board of Preachers to the University and of the Committee in charge of Phillips Brooks House; and these two institutions work harmoniously together to a single end — the promotion of the religious life of the University and the inculcation of social and civic duty. Both institutions are carried on by the voluntary participation and coöperation of the students. As Professor Moore points out, the endowment of the Chapel is much too small, and the same is true, though to a less degree, of Phillips Brooks House.

The Massachusetts Professorship of Natural History was founded by subscription in 1805, and the first Professor was William Dandridge Peck, who served from 1805 to 1822. On the 28th of October, 1907, the Corporation had occasion to thank Miss Mary Dandridge Peck of Sterling, Massachusetts, "for her welcome gift of a valuable collection of minerals, made by her grandfather, William Dandridge Peck, A.B. 1782, Massachusetts Professor of Natural History, and her father, William Dandridge Peck, A.B. 1833, M.D. 1836."

The exchange of Professors with Germany goes on in a highly satisfactory manner, and has of late been supplemented by ex-

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changes of students. Thus in November, 1907, the Corporation voted, "that the President be authorized to make standing agreements with European universities whereby one accredited student or graduate of a European university may in any year be admitted to the Graduate School of Arts and Sciences, a reciprocal privilege being offered to a student or graduate of Harvard University." Again, the Corporation voted, on the 15th of June, 1908, that "the President be authorized to offer through the Prussian Minister of Education, for a period of ten years, exemption from the regular tuition-fee to such advanced students, not exceeding five in any year, as the Minister may recommend for study in Harvard University."

It will be observed in the Table printed on p. 361, that the number of students resorting to Harvard University from foreign countries is decidedly increasing.

There is a standing rule in the general scheme for carrying on the Dining Hall, agreed to by the President and Fellows of Harvard College and the Harvard Dining Association, that no alcoholic drinks shall be served in Memorial Hall. On the 7th of October, 1907, the President and Fellows denied a petition of the Directors of the Harvard Dining Association that the University athletic teams be allowed to have ale in the training-table room of Memorial Hall. In the general interest of the Hall, the Directors desired to retain the training tables throughout the season; and since the students in training were supposed to need ale, the Directors asked the Corporation to make an exception to the standing rule about alcoholic drinks. On the refusal of the request of the Directors, the training tables left the Hall.

Early in the year 1907–08 it appeared that the Harvard Dining Association was not succeeding in maintaining an average weekly rate of board low enough to satisfy a considerable proportion of the members; so that the Directors applied to the President and Fellows to guarantee that the "general board," which covered all items except eggs, fish, and meat, should not exceed a certain fixed sum per week. In response to this request the Corporation, on December 30, guaranteed that the charge for "general board" should not exceed the sum of $3.20 per person per week, from

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January 1 to March 31. Two weeks later, upon the request of the Directors, the Corporation substituted $3 for $3.20. At the end of February, the Directors, desiring to change the system of charges for board so that fish and eggs should be included in the general board, the Corporation voted, "to guarantee that the cost of general board at Memorial Hall for the month of March, 1908, shall not exceed $4 a week"; and on the 30th of March this guarantee was continued until May 1, 1908, when it ceased. The motive of these temporary guarantees was to help the Association to try what seemed hopeful experiments in carrying on the Hall, without diminishing the membership too much. The sum charged for general board in accordance with these guarantees fell short of the actual cost by $2,562.53, and this deficiency was charged to the Samuel Ward Fund.

During the current year the experiment which was in progress at the close of the year 1907–08 having proved unsuccessful, and the life of the Association being again threatened, the Corporation have consented to a reduction in the annual payment for the extinction of the debt. A new experiment is to be tried after the close of the Christmas recess, namely, a fixed board at $5 a week with an order list for additional dishes.

The annual charges for interest on advances and the reduction of the debt constitute a rent for the Hall which makes an appreciable difference in the price of board, namely, from fifty to sixty cents a week per man, according to the number of students who belong to the Association. The Corporation do not feel at liberty to treat this indebtedness differently from any other debt to the general treasury of the University, inasmuch as they would be using for a portion of the students money in trust for all the students, if they gave the Association an unusually low rate of interest, or omitted the usual provisions for the extinction of a debt. Any person or group of persons that should wipe out the indebtedness of the Association would do a good deed for future generations of students, and for the University itself; for the maintenance in Cambridge of University dining-halls, where wholesome board can be secured at low rates, seems to be more than ever an indispensable condition of University growth and serviceableness in a democratic way.

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In October, 1907, the city of Cambridge, by vote of the City Council, accepted the gift of a combination engine and hose wagon with a pair of horses from the President and Fellows of Harvard College, a gift which had been offered by the President and Fellows nineteen months earlier. The Mayor sent to the President and Fellows "the sincere thanks of the city for this desirable and timely gift." This is the second time that the University has given fire apparatus to the city of Cambridge, the motive of the Corporation being to contribute to the protection of the city from fire, and to recognize the occasional services of the Cambridge Fire Department on the premises of the University.

On October 28 the President presented to the Corporation a statement showing that increases of salaries paid to teachers in the Faculty of Arts and Sciences in the years 1905–06 and 1906–07, in accordance with the terms of the Teachers' Endowment Fund, exceeded the income of the Fund in the year ending July 31, 1907, by $3,312.11, and that the further increases of salary in the year now under review would probably exceed $10,000. Thereupon it was voted "that until the further order of this Board the entire income of the Teachers' Endowment Fund be credited to the account of College salaries." The amount of the Endowment Fund on the 31st of July, 1907, was $1,933,120.48. At the same time the President and Fellows directed that the income of the Funds of the Classes of 1880, 1881, and 1882, — funds raised on their twenty-fifth anniversaries, — be also credited to the account of College salaries. They also directed that the income of the Martin Brimmer Fund be credited to College salaries in the Department of Fine Arts. The Martin Brimmer Fund of $50,000 came to the President and Fellows in 1907 as an unrestricted Fund.

The Teachers' Endowment Fund continues to be increased through the successive payments made on pledges given at or about the time the subscription was raised. The amount added to the Fund during the year under review was $61,542.82.

The number of scholarships established by Harvard Clubs is increasing. In 1907–08 the following Clubs were maintaining scholars at the University: Buffalo, Chicago (Dunlap Smith

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Scholarship), Cleveland, New Jersey, Philadelphia, Rocky Mountain, St. Louis, Hawaii, Seattle, Nebraska, Lowell, San Francisco, Minnesota. These scholarships, being generally assignable by preference to a boy from the locality of the Club, are very useful in maintaining good connections between Harvard College and the secondary schools in the cities where the Clubs are situated. They are all the more influential because their incumbents must enter Harvard College by examination, instead of entering on the certificates of their schools, which is the prevailing practice in the United States. These scholarships are most advantageously used for starting a newcomer every year as a Freshman in the College. Competent and industrious students thus well started are sure, in later years, to win from other sources such aids as they need.

The Class of 1883 on its twenty-fifth anniversary of graduation gave to the College a fund of $100,000, the income of which is to be expended "for purposes of the College in the entire discretion of the Corporation." The members of the Class hope that this fund will later be increased by gifts or bequests. In announcing this gift, the special finance committee of the Class communicated to the Corporation the following quotation from its last official circular issued on April 28: "In order that the gift shall be in every way a voluntary and cheerful offering from the Class, the Committee has unanimously voted that the money shall be given to the Corporation of the College on Saturday, June 20, the day before the beginning of our Class celebration, and that the special finance committee shall then disband. No attempt, therefore, will be made to raise money during the period of our festivities, and our enjoyment of the occasion will be unmarred by final appeals for contributions." This purpose of the finance committee was carried out. The success of the Class in raising this fund during a year of business depression prophesies the permanence of the practice of making a great gift to the University by the Class which is celebrating the twenty-fifth anniversary of its graduation. The decided success of graduates from the new Harvard Graduate Schools of Applied Science and Business Administration will make this filial observance, instituted by the Class of 1879, more and more natural and feasible as the years go on.

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During the year under review Harvard graduates in engineering employed in greater New York and its vicinity organized a new society under the name of the Harvard Engineering Society of New York. On the 8th of June, the President and Fellows received from the Society a gift, the terms of which were somewhat unusual and decidedly interesting. Most of the subscribers to this fund are men under thirty-five years of age, who are employed on the great public and corporation works now in process of execution in and about New York City. The essential parts of the letter of gift are as follows: —

"We enclose herewith a check to your order to the amount of $600 which is the first instalment of a fund which is being subscribed by members of the Harvard Engineering Society of New York, to be used to help those students studying for an engineering degree who, by reason of their financial needs, are unable to meet the Summer requirements, such as the surveying courses at the Harvard Engineering Camp at Squam Lake, shop-work courses, and the field work in mining.

"This fund we desire to have called the 'Student Fund of the Harvard Engineering Society of New York.'

"The awards to needy students from this fund shall be in the nature of loans from this sum to be repaid by such students as soon as possible, interest on the same not to be charged until the completion of the college course."

The Corporation gladly accepted this gift, and adopted rules for the administration of the loan fund in accordance with the desires of the Society. The rules provided that the Dean of the Graduate School of Applied Science should receive the applications, and apportion the loans on the basis of the student's previous work and reputation, no applicant to receive more than $75.

In September a bronze replica of the Discobolus of the Vatican, a gift from Mr. Ernest W. Longfellow, was set up in front of the Hemenway Gymnasium, Mr. Longfellow providing not only the statue, but the pedestal and its foundations. This gift is a very appropriate and beautiful decoration of the College grounds and the city of Cambridge.

By the generosity of a few friends of the University the Corporation were able to purchase a farm adjoining the Harvard Engineering Camp on Squam Lake, New Hampshire, for the sum of $3000, thus securing through the good offices of Professor Ira N. Hollis a very desirable addition to the land available for field

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work in engineering. The area now belonging to the President and Fellows at this Camp is about 650 acres.

The work of the Appointments Office was satisfactorily developed during the year. Not only did the total number of men registered with the office show an increase of 396 over the number registered at the same date in 1907; but the number of mature, skilled men who register in the office is steadily on the increase. The office does two sorts of work. It supplies men to take permanent positions as teachers, or in business houses; and it also fills a large number of temporary positions. The number of permanent positions filled was 612, and the number of temporary positions 1,600. The variety of the employments, both permanent and temporary, is remarkable. The teaching positions are still much more numerous than the business or technical positions. The temporary employments oftenest supplied are those of choremen, clerks, guides, meter readers, proctors, stenographers, supervisors of study, ticket-takers, tutors for special subjects, and typewriters. The demand for teachers in single subjects is more than six times the demand for men to teach two or more subjects, a fact which illustrates the general tendency in schools and colleges to strictly departmental teaching. As yet the Appointments Office is successful in recording only a part of the positions filled through the influence of the University. Students are constantly obtaining employment in Cambridge and Boston without making any report on the subject to the Appointments Office.

In January, 1907, the former Comptroller, Allen Danforth, by request of the Corporation, submitted to the Board a scheme for the distribution of the total *net* payments in the University Table of the Treasurer's Annual Statement among the principal departments of the University, in accordance with rules which would be capable of application in an automatic manner year after year. Mr. Danforth had applied these rules to a distribution of the net expenses in the University account for the year 1904–05, in order to illustrate the way in which they would work. The object in view was the relief of the annual budget of the account called University, College, and Library, an account which had had for several years a serious deficit. The College had been held re-

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sponsible for any deficit occurring in this account, and no charge had been made against the professional schools, the Observatory, or other departments having property in the hands of the Corporation, or free income from students. It was natural that these departments outside of Harvard College should have been exempt from contributions to general University expenses, so long as they had only trifling endowments, few and cheap buildings, and scanty incomes from students. It seemed to the Corporation that the time had come, in view of the prosperity of these departments as regards endowment or income from students, when they should be called upon to pay a portion of the general University expenses, and thus to relieve the budget of Harvard College. Notice was, therefore, given to the several departments concerned that such a distribution would be made and charged in the year 1907–08, and in each year thereafter until the further order of the Corporation. The manner in which the distribution has been made in the accounts of the year under review is fully set forth in the Treasurer's Statement, pp. 5, 12–22, 89, 94, 96–99, and 121–156. Some of the net expenditures are distributed to the several departments in proportion to the number of students; others in proportion to the income of the funds held for their benefit by the President and Fellows; others again in proportion to the total of collections and payments made for the several departments by the Bursar; and still others in proportion to the floor areas of their respective buildings in the charge of the Inspector of Buildings. Certain expenses incurred for official publications of the University have been divided among the departments in proportion to the spaces they severally occupy therein; and finally, charges to retiring allowances have been transferred to the several departments in proportion to the amount of the allowances paid to their officers respectively.

These general principles, applied for the most part automatically, but in some instances by the exercise of discretion within narrow limits, have resulted for the year under review in the transfer of $20,985.22 from the University account to accounts not included in the College and Library. The combined account called University, College, and Library thereafter shows a surplus of $6,152.44. If this distribution had not been made, that account would have shown a deficit of $14,832.78 (Treasurer's

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Statement, p. 5). The amount of the University charge to each department is shown in the Treasurer's Statement (pp. 12 to 22). The departments which had to meet the new charge from accrued income or from gifts, and not from the proper income of the year, were the Divinity School, the Dental School, the Arnold Arboretum, and the Observatory. The Stillman Infirmary could not meet the charge at all.

Prior to 1867 it had been for many years the custom of the Corporation to allow five per cent on the funds they held for the professional schools, and on the few other outlying endowments then existing, and to appropriate to the College any excess over five per cent which the funds in their hands might have earned. When the Corporation adopted, at the instance of the Board of Overseers, the plan of allowing to all the funds represented by the General Investments of the University the average rate earned on those investments, a strict logic would have required them to divide expenses incurred on behalf of all the departments of the University among all the departments partaking in the general distribution of income. This logical completion of the method of keeping the accounts adopted in 1867 has been deferred until the year 1907–08.

The Corporation made only slight changes during the year August 1, 1907, to July 31, 1908, in the proportions of their investment in the various classes of property embraced in the list of the General Investments (Treasurer's Statement, p. 10). Bonds decreased a little; railroad, manufacturing, and telephone stocks increased a little, as did also real estate, mortgages, and notes. On the whole, the changes in these proportions were slight, considering that it was a year of commercial and financial depression. The rate of interest earned on the General Investments was the highest since 1891–92. It is an interesting fact that the rate earned on the General Investments of the University was higher than that earned on the Special Investments. The benefactor who trusts his fund to a Special Investment not only gets for his fund none of the insurance which the mass of the General Investments gives to every fund so invested, but also runs the risk of obtaining from time to time a smaller interest on his fund than it would receive if invested with the general mass. These considerations ought to induce prospective benefactors who value the security

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and perpetuity of their benefactions to prefer the General Investments to the Special. It should be observed, however, that the Corporation often find it just to hold the actual property in which a gift is received in the class of Special Investments for a time, with the expectation of transferring the fund to the General Investments at a more convenient season.

The gifts for capital account during the year amounted to $449,972.53, and the gifts for immediate use amounted to $241,924.23. The total amount of gifts was, therefore, $691,896.76, the smallest sum since 1896–97, and yet a large addition to the resources of the University considering that the year was a year of hardship and anxiety for most business men.

The following reports of the Deans of Faculties and Schools, the Chairmen of Departments or Divisions, and the Directors of Scientific establishments are commended to the attention of the Overseers, the Alumni, and all friends of the University and students of education. The Table of Contents (p. 3) and the Index (pp. 363 to 367) will direct the reader interested in any special topic to the right pages. The reports are full of descriptions and discussions which are necessary to an understanding of the present activities and policies of the University.

CHARLES W. ELIOT, *President.*

CAMBRIDGE, January 12, 1909.

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# REPORTS OF DEPARTMENTS

## THE FACULTY OF ARTS AND SCIENCES

To the President of the University: —

Sir, — I have the honor of presenting a report on the work of the Faculty of Arts and Sciences for the academic year 1907–08.

Besides the President, the Faculty contained seventy-six Professors, two Associate Professors, forty-seven Assistant Professors, one Lecturer, twenty Instructors, the Assistant Dean of Harvard College, the Recorder, the Secretary to the Corporation, and the Secretary for Appointments, — in all, a hundred and fifty-one members.

### *Instruction in 1907–08*

With the following list of courses of instruction that were actually given under the authority of the Faculty, I print a statement of the number and the classification of the students in each course. The figures are those officially returned to the Recorder by the several instructors at the close of the academic year, and take no account of persons who, regularly or irregularly, attended the exercises and did the work of a course without being officially recognized as members of it. The abbreviations are those ordinarily used in such lists: —

### COURSES OF INSTRUCTION GIVEN IN 1907–08

#### Semitic Languages and History

*For Undergraduates and Graduates:* —

1. Professor Lyon and Mr. Davey. — Hebrew (elementary course). Explanation of parts of Genesis and of the Book of Psalms.
2 Ju., 3 So., 2 Sp., 2 Di. Total 9.

12. Professor Lyon. — History of Israel, political and social, till the capture of Jerusalem by the Romans.
2 Se., 2 Ju., 3 So., 1 Fr., 1 Sp., 4 Di. Total 13.

13. Professor Toy. — History of the Hebrew Religion, with comparison of other Semitic Religions. 1 Se., 1 So., 10 Di. Total 12.

14 *hf.* Professor Toy. — History of the Spanish Califate. The Barbary States; Moslems in Sicily; The Korān.
1 Gr., 1 Se., 3 Ju., 1 So., 1 Di. Total 7.



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*Primarily for Graduates:* —

2. Professor Toy. — Hebrew (second course). Interpretation of parts of the Prophets and the Poetical Books. 1 Se., 1 Di. Total 2.

3 $^{2}hf$. Mr. Davey. — Jewish Aramaic. Interpretation of parts of Ezra, Daniel, and the Targums. 1 So. Total 1.

3*a* $^{1}hf$. Mr. Davey. — Classical Aramaic (Syriac). 1 Se. Total 1.

3*b* $^{2}hf$. Mr. Davey. — Classical Aramaic (second course). 1 Se. Total 1.

‡4. Professor Lyon and Mr. Davey. — Assyrian. 1 So. Total 1.

5. Professor Lyon. — Assyrian (second course). The Laws of Hammurabi; Contracts from the time of the Hammurabi Dynasty. 1 Se. Total 1.

‡7. Professor Toy and Mr. Davey. — Arabic. Brünnow's Chrestomathy. 1 So. Total 1.

‡8. Professor Toy. — Arabic (second course). The Moallakāt; Motenebbi; Ibn Ḫaldun; The Korān. 1 Se. Total 1.

Courses of Research

‡20*b*. Professor Toy. — Semitic Verb-Syntax. 1 Di. Total 1.

20*c*. Professor G. F. Moore. — Old Testament: Methods of Historical Investigation, with special reference to the Old Testament. 1 Di. Total 1.

## Indic Philology

*For Undergraduates and Graduates:* —

1*a* $^{1}hf$. Professor Lanman. — Elementary Sanskrit. 1 So., 2 Instr. Total 3.

1*b* $^{2}hf$. Professor Lanman. — Elementary Sanskrit (continued). 1 So., 2 Instr. Total 3.

*Primarily for Graduates:* —

‡4 $^{1}hf$. Professor Lanman. — Pāli. Sacred Books of Buddhism: Elwell's Jātakas (all), Andersen's Reader (part). 1 Gr., 1 So., 1 R. Total 3.

‡5 $^{2}hf$. Professor Lanman. — Pāli. Andersen (finished), Dhamma Pada (all), Sutra Nipāta (books 1–14). 1 Gr., 1 So. Total 2.

Course of Special Study

‡20*c* $^{2}$. Professor Lanman. — Pāli. Originals of Warren's Buddhism (book 1), Milinda (books 1–3). Nineteen weekly meetings. 1 Gr., 1 So., 1 R. Total 3.

## The Classics

*Primarily for Undergraduates:* —

Greek

*G*. Dr. C. N. Jackson. — Course for Beginners. 2 Ju., 5 So., 4 Fr., 2 Sp. Total 13.

*A*. Dr. E. Cary. — Greek Literature. Homer, Odyssey; Euripides and Aristophanes. 3 So., 7 Fr., 1 Sp. Total 11.

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*B.* Associate Professor C. P. PARKER, Asst. Professor HARRIS, and Dr. C. N. JACKSON. — Greek Literature. Plato; Lysias; Elegiac, Iambic, and Lyric Poets; Euripides. Lectures on the History of Greek Literature.
2 Ju., 9 So., 42 Fr., 2 Sp. Total 55.

*E hf.* Dr. C. N. JACKSON. — Greek Prose Composition (first course).
7 So., 14 Fr. Total 21.

1*a* $^{1}$*hf.* Dr. E. CARY. — Greek Literature. The Period of Athenian Supremacy. Herodotus; Aeschylus; Plutarch. 6 So., 6 Fr. Total 12.

1*b* $^{2}$*hf.* Asst. Professor HARRIS. — Greek Literature. The Period of Athenian Supremacy. Thucydides; Aristophanes; Sophocles.
3 Ju., 6 So., 6 Fr. Total 15.

2. Associate Professor C. P. PARKER and Dr. E. CARY. — Greek Literature. Aristophanes; Thucydides; Aeschylus; Sophocles.
2 Ju., 22 So., 1 Sp. Total 25.

3 *hf.* Asst. Professor HARRIS. — Greek Prose Composition (second course).
3 Gr., 1 Se., 5 Ju., 12 So., 1 Sp. Total 22.

LATIN

*B.* Professors HOWARD and CLIFFORD H. MOORE, Associate Professor C. P. PARKER, Asst. Professor E. K. RAND, and Drs. C. N. JACKSON and PEASE. — Latin Literature. Livy; Horace; Terence.
11 So., 119 Fr., 4 Sp. Total 134.

*E hf.* Asst. Professor E. K. RAND. — Latin Composition (first course). Translation of English narrative. 1 Se., 5 So., 19 Fr. Total 25.

1. Professor CLIFFORD H. MOORE and Associate Professor C. P. PARKER. — Latin Literature. Tacitus; Horace; Catullus; and other poets.
1 Se., 2 Ju., 34 So., 3 Sp. Total 40.

2*a* $^{1}$*hf.* Asst. Professor E. K. RAND. — Latin Literature. General View of Latin Poetry. 4 Ju., 5 So., 2 Fr. Total 11.

2*b* $^{2}$*hf.* Asst. Professor E. K. RAND. — Introduction to Latin Prose Literature. Tacitus. 4 Ju., 6 So. Total 10.

3 *hf.* Professor CLIFFORD H. MOORE. — Latin Composition (second course).
3 Gr., 3 Ju., 16 So., 1 Sp. Total 23.

*For Undergraduates and Graduates:* —

GREEK

6. Asst. Professor GULICK. — Greek Literature. Demosthenes; Aeschines; Aeschylus; Sophocles; Aristophanes. 4 Gr., 13 Ju., 2 So. Total 19.

7 *hf.* Asst. Professor GULICK. — Greek Prose Composition (third course).
1 Gr., 5 Se., 2 Ju., 1 So. Total 9.

9 $^{1}$*hf.* Professor ROPES. — Introduction to the Study of the New Testament. The Origin and History of the New Testament Writings.
1 Se., 3 Ju., 1 So., 3 Di. Total 8.

8. Professors GOODWIN and J. H. WRIGHT. — Plato; Aristotle. Survey of Greek Philosophy from Thales to Aristotle.
1 Gr., 5 Se., 1 So., 1 Di. Total 8.

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16 ¹*hf.* Asst. Professor HARRIS. — Greek Literature. The Iliad, with studies of its influence to the time of the Renaissance.
1 Gr., 1 Se., 5 Ju., 3 So. Total 10.

14 ¹*hf.* Asst. Professor GULICK. — Greek Literature. Lucian and his times.
2 Gr., 1 Se. Total 3.

LATIN

6. Professor HOWARD. — Latin Literature. Suetonius; Pliny; Juvenal; Martial.
4 Gr., 1 Se., 13 Ju. Total 18.

7 *hf.* Associate Professor C. P. PARKER. — Latin Composition (third course).
2 Gr., 4 Se., 2 Ju. Total 8.

8. Professor CLIFFORD H. MOORE and Associate Professor C. P. PARKER. — Latin Literature. Cicero; Lucretius; Plautus.
1 Gr., 8 Se., 4 Ju., 2 So. Total 15.

10. Professor MORGAN. — The Private Life of the Romans.
3 Gr., 22 Se., 34 Ju., 11 So., 1 Sp. Total 71.

12. Professor HOWARD. — History of Latin Literature to the middle of the Second Century.
13 Gr. Total 13.

*Primarily for Graduates:* —

CLASSICAL PHILOLOGY

25 ²*hf.* Professor CLIFFORD H. MOORE. — Introduction to the Interpretation and Criticism of Classical Authors.
7 Gr. Total 7.

77 ²*hf.* Asst. Professor GULICK. — Introduction to the critical study of Homer.
4 Gr. Total 4.

‡43. Professor J. H. WRIGHT. — Sophocles. The Plays and Fragments.
10 Gr., 3 Se., 5 R. Total 18.

26 ²*hf.* Asst. Professor HARRIS. — Theocritus, Bion, and Moschus.
6 Gr., 2 Se., 4 Ju., 1 Di. Total 13.

66 ¹*hf.* Professor MORGAN. — The Philippics of Demosthenes and of Cicero.
6 Gr. Total 6.

40. Professor MORGAN. — Literary Criticism in Antiquity. Aristotle; Longinus; Horace; Quintilian.
8 Gr., 1 R. Total 9.

‡60 ¹*hf.* Professor ROPES. — The Gospel of Mark.
7 Di., 2 R. Total 9.

‡82 ¹*hf.* Professor ROPES. — The Epistle to the Hebrews, and the First Epistle of Clement of Rome.
3 Di., 1 R. Total 4.

50 ²*hf.* Professor MORGAN. — Roman Satire from Ennius to Juvenal.
8 Gr. Total 8.

56 ¹*hf.* Professor HOWARD. — The Reigns of Claudius and Nero. Suetonius; Tacitus.
4 Gr., 2 Se. Total 6.

34 ¹*hf.* Asst. Professor GULICK. — Greek Grammar (Sounds and Inflections). Study of Dialectic Inscriptions.
3 Gr., 2 R. Total 5.

‡63 ¹*hf.* Professors MINTON WARREN and CLIFFORD H. MOORE. — Introduction to Latin Epigraphy.
3 Gr., 1 Se., 1 R. Total 5.

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‡32 1*hf*. Professor CLIFFORD H. MOORE. — The Religion and Worship of the Romans. Ovid's Fasti. 5 Gr., 6 R. Total 11.

64*a* 1*hf*. Asst. Professor CHASE. — Introduction to the study of Greek Archaeology. 3 Gr., 3 Se., 1 So. Total 7.

64*b* 2*hf*. Asst. Professor CHASE. — Introduction to the study of Etruscan and Roman Archaeology. 6 Gr., 1 Se., 1 So. Total 8.

‡49 1*hf*. Asst. Professor CHASE. — The History of Greek Vase Painting. 2 Se., 3 R. Total 5.

‡69 2*hf*. Asst. Professor CHASE. — Greek Numismatics. 2 Se., 3 R. Total 5.

### 20. THE SEMINARY OF CLASSICAL PHILOLOGY.

Professors J. H. WRIGHT and MINTON WARREN and Asst. Professor E. K. RAND, Directors for 1907–08. — Training in philological criticism and research. Text-criticism and interpretation of Greek and Latin authors: for 1907–08, Sophocles and Terence. 8 Gr. Total 8.

## English

### ENGLISH COMPOSITION

*Primarily for Undergraduates:* —

*A*. Professors BRIGGS and HURLBUT, Asst. Professor GARDINER, Drs. WEBSTER, HUTCHISON, and BERNBAUM, Messrs. NUTTER, STEARNS, HERSEY, L. LEWIS, RICE, FOBES, HANFORD, M. MCLEOD, BELLOWS, LECKNER, and SHIPHERD. — Rhetoric and English Composition.
1 Gr., 2 Ju., 13 So., 399 Fr., 61 Sp., 18 Sc., 4 Bu. Total 498.

*D* 1 *or* 2*hf*. Mr. T. HALL, assisted by Messrs. COUES, HUBBARD, and MCLEOD. — English Composition.
2 Se., 10 Ju., 90 So., 92 Fr., 14 Sp., 8 Sc., 1 Med. Total 217.

22. Dr. MAYNADIER and Mr. BROADUS. — English Composition.
1 Gr., 9 Se., 35 Ju., 28 So., 5 Fr., 8 Sp. Total 86.

18. Asst. Professor HUNTINGTON (Brown University), and Messrs. CURTIS and LECKNER. — The Forms of Public Address.
2 Gr., 3 Se., 29 Ju., 17 So., 1 Fr., 1 Sp. Total 53.

*For Undergraduates and Graduates:* —

12. Mr. COPELAND. — English Composition.
1 Gr., 7 Se., 11 Ju., 6 So., 1 Fr., 5 Sp. Total 31.

*Primarily for Graduates:* —

5. Professor BRIGGS. — English Composition (advanced course).
18 Gr., 1 G.S., 8 Se., 9 Ju., 3 So., 1 Sp., 2 Di. Total 42.

### ENGLISH LITERATURE

*Primarily for Undergraduates:* —

28 *hf*. Professors BRIGGS, B. PERRY, KITTREDGE, BAKER, and NEILSON, and Mr. T. HALL. — History and Development of English Literature in outline.
116 Fr., 6 Sp. Total 122.

41. Professor WENDELL, Mr. W. R. CASTLE, and Dr. HUTCHISON. — History of English Literature from the Elizabethan times to the present.
13 Se., 38 Ju., 63 So., 16 Sp. Total 130.

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45 ²*hf*. Mr. COPELAND. — Lives, Characters, and Times of Men of Letters, English and American.
1 Gr., 1 G.S., 33 Se., 57 Ju., 57 So., 9 Fr., 7 Sp. Total 165.

*For Undergraduates and Graduates:* —

3*a* ¹*hf*. Dr. WEBSTER. — Anglo-Saxon.
21 Gr., 1 Se., 3 Ju., 1 So., 1 Sp. Total 27.

1. Professors NEILSON and F. N. ROBINSON. — Chaucer.
18 Gr., 4 Se., 2 So., 1 Sp. Total 25.

2. Professor KITTREDGE. — Shakspere.
32 Gr., 9 Se., 22 Ju., 28 So., 3 Fr., 7 Sp. Total 101.

11*a* ¹*hf*. Professor NEILSON. — Bacon.
5 Se., 6 Ju., 3 So., 2 Fr., 5 Sp. Total 21.

11*b* ²*hf*. Professor NEILSON. — Milton.
12 Gr., 1 Se., 12 Ju., 9 So., 4 Fr., 3 Sp. Total 41.

56 ²*hf*. Dr. BERNBAUM. — English Literature of the Eighteenth Century, with particular reference to the Sentimental School.
3 Gr., 5 Se., 11 Ju., 13 So., 2 Fr., 3 Sp. Total 37.

57 ²*hf*. Mr. W. R. CASTLE. — The Works and Influence of Pope.
3 Gr., 9 Se., 3 Ju., 12 So., 3 Sp. Total 30.

16 ²*hf*. Professor BRIGGS. — History and Principles of English Versification.
16 Gr., 4 Se., 7 Ju., 6 So., 1 Sp. Total 34.

*Primarily for Graduates:* —

3*b* ²*hf*. Professors KITTREDGE and F. N. ROBINSON. — Anglo-Saxon. Béowulf.
27 Gr., 1 Se., 1 So., 1 Sp. Total 30.

25 ²*hf*. Professor F. N. ROBINSON. — Anglo-Saxon Poetry. Interpretation of Texts, and Investigation of Special Topics. 4 Gr. Total 4

44 ²*hf*. Professor KITTREDGE. — Chaucer. Study of Special Topics.
7 Gr. Total 7.

40 ²*hf*. Professsor NEILSON. — Scottish Literature from Barbour to Lindesay.
8 Gr. Total 8.

9 ¹*hf*. Dr. MAYNADIER. — Spenser. 10 Gr., 1 Se., 1 So. Total 12.

14. Professor WENDELL. — The Drama in England from the Miracle Plays to the Closing of the Theatres. 24 Gr., 2 Se., 1 Ju. Total 27.

24 ¹*hf*. Professor NEILSON. — Studies in the Poets of the Romantic Period.
31 Gr., 2 Se., 2 Ju. Total 35.

55 ¹*hf*. Professor B. PERRY. — Tennyson. 21 Gr., 1 Se., 1 So., 1 Sp. Total 24.

29 ²*hf*. Dr. MAYNADIER. — The English Novel.
10 Gr., 8 Se., 5 Ju., 6 So., 1 Sp. Total 30.

### COURSES OF SPECIAL STUDY

20. The instructors in English held themselves ready to assist and advise competent Graduate Students who might propose plans of special study in the language or literature of the period. Such plans, however, must in each case have met the approval of the Department.

20*c*. Professor NEILSON. — Modern English Literature. 5 Gr. Total 5.

20*x*. Mr COPELAND. — Special work in Composition. 1 Gr. Total 1.

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## Public Speaking

*Primarily for Undergraduates: —*

1[1]. Messrs. WILLARD and DEMING. — Voice Cultivation.
4 Gr., 20 Se., 20 Ju., 32 So., 40 Fr., 6 Sp., 1 Sc. Total 123.

2 *hf*. Asst. Professor WINTER and Mr. WILLARD. — Masterpieces of Discourse.
1 Gr., 9 Se., 9 Ju., 16 So., 1 Fr. Total 36.

3 *hf*. Asst. Professor WINTER and Mr. WILLARD. — Platform Address.
9 Se., 9 Ju., 13 So., 3 Sp. Total 34.

4 *hf*. Asst. Professor WINTER. — Dramatic Interpretation.
1 Se., 1 Ju., 1 So., 2 Sp. Total 5.

5[2]. Asst. Professor WINTER, and Messrs. WILLARD and DEMING. — Advanced Training in Platform Speaking. 14 Se., 12 Ju., 1 Sc. Total 27.

## Germanic Languages and Literatures

### GERMAN

*Primarily for Undergraduates: —*

*A*. Asst. Professor BIERWIRTH, assisted by Drs. BOESCHE, WEBER, COLWELL, LIEDER, and STEWART, and Mr. PETTENGILL. — Elementary Course.
1 Gr., 6 Ju., 24 So., 185 Fr., 25 Sp., 10 Sc., 1 Bu., 1 Di. Total 253.

*B*. Mr. W. G. HOWARD. — Elementary Course (counting as two courses).
18 Fr., 8 Sp. Total 26.

*C*. Drs. BOESCHE and STEWART — German Prose and Poetry.
7 So., 31 Fr., 8 Sp. Total 46.

1*a*. Drs. WEBER and COLWELL. — German Prose and Poetry.
1 Gr., 6 Ju., 46 So., 13 Fr., 3 Sp., 1 Di. Total 70.

1*b*. Drs. COLWELL and WEBER. — German Prose. Subjects in History and Biography. 6 Ju., 28 So., 13 Fr., 2 Sp., 3 Sc. Total 52.

1*c*. Dr. LIEDER. — German Prose, narrative and descriptive.
5 Ju., 17 So., 5 Fr., 1 Sp., 3 Sc. Total 31.

*Fhf*. Dr. STEWART. — Practice in speaking and writing German (first course).
1 Gr., 1 Se., 6 Ju., 10 So., 5 Fr., 2 Sp. Total 25.

*Hhf*. Dr. WEBER. — Practice in speaking and writing German (second course).
1 Gr., 2 Se., 2 Ju., 3 So., 2 Fr. Total 10.

2*a*. Professor VON JAGEMANN and Dr. BOESCHE. — Introduction to German Literature of the Eighteenth and Nineteenth Centuries. Lessing, Goethe, and Schiller. German Ballads and Lyrics.
1 Se., 9 Ju., 16 So., 35 Fr., 2 Sp. Total 63.

2*b*. Professor H. S. WHITE and Dr. LIEDER. — Introduction to German Literature of the Eighteenth and Nineteenth Centuries. Lessing, Goethe, and Schiller. German Ballads and Lyrics.
3 Se., 24 Ju., 14 So., 36 Fr., 3 Sp. Total 80.

3. Asst. Professor BIERWIRTH. — Schiller and his Time. Der Dreissigjährige Krieg; Wallenstein; Maria Stuart; Die Jungfrau von Orleans; Die Braut von Messina; Gedichte. 2 Se., 4 Ju., 14 So., 1 Sp. Total 21.

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4. Asst. Professor WALZ. — Goethe and his Time. Works of the Storm and Stress Period; Autobiographical Works; Poems; Egmont; Iphigenie; Tasso; Faust. 1 Gr., 3 Se., 16 Ju., 34 So., 7 Fr., 1 Sp. Total 62.

25 *1hf.* Professor FRANCKE and Mr. E. H. P. GROSSMANN. — History of German Literature in Outline. 23 Se., 22 Ju., 32 So., 6 Fr., 3 Sp. Total 86.

*For Undergraduates and Graduates: —*

*G hf.* Dr. BOESCHE. — German Grammar and practice in writing German (advanced course). 2 Gr., 1 Ju., 2 So. Total 5.

6 *1hf.* Professor FRANCKE. — Die Blütezeit der deutschen Literatur im achtzehnten Jahrhundert. 7 Gr., 2 Se., 6 Ju., 2 So. Total 17.

26*a* *1hf.* Mr. W. G. HOWARD. — German Literature in the first half of the Nineteenth Century. Kleist; Uhland; Heine. 2 Gr., 4 Ju., 2 So. Total 8.

26*b* *2hf.* Mr. W. G. HOWARD. — German Literature in the second half of the Nineteenth Century. The Development of the Novel and the Drama. 3 Gr., 3 Se., 4 Ju., 3 So. Total 13.

32. Professor H. S. WHITE. — Bismarck's Life and Writings. Selections from Bismarck's speeches, state papers, and private correspondence; with some study of the development of Germany as illustrated in Bismarck's utterances. 8 Se., 9 Ju., 8 So. Total 25.

8. Asst. Professor WALZ. — German Literature in the Twelfth and Thirteenth Centuries. Nibelungenlied; Kudrun; Hartmann; Wolfram; Walther von der Vogelweide. Translation into modern German. 8 Gr. Total 8.

*Primarily for Graduates: —*

‡17 *1hf.* Professor H. S. WHITE. — Walther von der Vogelweide. 4 Gr. Total 4.

‡12*a* *1hf.* Professor VON JAGEMANN. — Gothic. Introduction to the study of Germanic Philology. General Introduction; Phonology. 14 Gr., 1 Se., 2 R. Total 17.

‡14 *2hf.* Professor VON JAGEMANN. — Old Saxon. Introduction to Germanic Metrics. 4 Gr., 1 Se., 2 R. Total 7.

‡15 *1hf.* Asst. Professor WALZ. — Old High German. 7 Gr., 1 Se. Total 8.

‡21. Professor VON JAGEMANN. — History of the German Language, with special study of selected topics. 1 Gr. Total 1.

SEMINARY COURSES

‡20*a* *1hf.* Professor FRANCKE. — Lessing's Laokoon. 5 Gr., 1 Ju., 1 R. Total 7.

‡20*b* *2hf.* Professor FRANCKE. — Schiller's Philosophical Poems. 5 Gr., 1 Ju., 1 R. Total 7.

‡20*c* *2hf.* Professor H. S. WHITE. — Goethe's Italienische Reise. 2 Gr., 1 Se., 1 Ju. Total 4.

‡20*d* *2hf.* Asst. Professor WALZ. — Kudrun. 3 Gr. Total 3.

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SCANDINAVIAN

*Primarily for Graduates:* —

2 ²*hf*. Professor SCHOFIELD. — Icelandic (Old Norse). The Sagas, the Younger Edda, and the Elder Edda. 8 Gr., 1 Ju. Total 9.

## Romance Languages and Literatures

FRENCH

*Primarily for Undergraduates:* —

*A*. Messrs. CHURCHMAN, ALLARD, WHITTEM, and POST. — Elementary Course. 6 Gr., 1 Se., 3 Ju., 15 So., 67 Fr., 20 Sp., 3 Sc., 1 Di. Total 116.

1*c*. Mr. HAWKINS. — Reading, translation, grammar, and composition. 1 Se., 2 So., 4 Fr., 3 Sp., 4 Sc. Total 14.

1*b*. Messrs. SPIERS, HAWKINS, WILKINS, and POST. — French Prose, historical and general. Translation from French into English. 9 Ju., 14 So., 55 Fr., 10 Sp., 1 Sc. Total 89.

1*a*. Associate Professor DE SUMICHRAST and Mr. BRUN. — Reading, translation, grammar, and composition. 5 Ju., 10 So., 24 Fr., 4 Sp. Total 43.

2*c*. Asst. Professor M. A. POTTER, and Messrs. LINCOLN, HAWKINS, WHITTEM, and POST. — French Prose and Poetry. Corneille; Racine; Molière; Victor Hugo; Alfred de Musset; Balzac; Mérimée; Flaubert; Daudet; Loti; Zola. Composition. 5 Ju., 23 So., 53 Fr., 6 Sp. Total 87.

2*a*. Asst. Professor C. H. C. WRIGHT, and Messrs. BRUN, ALLARD, and SPIERS. — French Prose and Poetry. Corneille; Racine; Molière; Victor Hugo; George Sand; Alfred de Musset; Sainte-Beuve; Rostand. Composition. 4 Se., 13 Ju., 29 So., 84 Fr., 4 Sp. Total 134.

3. Mr. ALLARD. — French Composition (elementary course). 1 Se., 4 Ju., 8 So., 1 Sp. Total 14.

4 ¹*hf*. Mr. BRUN. — French Composition (intermediate course). 1 Gr., 6 Se., 4 Ju., 13 So., 3 Fr. Total 27.

5 ²*hf*. Mr. BRUN. — French Composition (advanced course). 2 Gr., 3 Se., 4 Ju., 7 So., 3 Fr. Total 19.

*For Undergraduates and Graduates:* —

6*c*. Professor GRANDGENT. — General View of French Literature. 2 Gr., 2 Se., 2 Ju., 12 So. Total 18.

6. Associate Professor DE SUMICHRAST. — General View of French Literature. 3 Gr., 4 Se., 17 Ju., 44 So., 3 Fr. Total 71.

8. Associate Professor DE SUMICHRAST. — French Literature in the Eighteenth Century. 2 Gr., 19 Se., 22 Ju., 4 So. Total 47.

9. Asst. Professor C. H. C. WRIGHT. — French Literature in the Seventeenth Century. 2 Gr., 3 Se. Total 5.

16. Mr. ALLARD. — The French Drama in the Nineteenth Century. 6 Gr., 3 Se., 4 Ju., 3 So. Total 16.

*Primarily for Graduates:* —

11 ¹*hf*. Professor SHELDON. — Old French Literature. 3 Gr. Total 3

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21 *hf.* Asst. Professor C. H. C. WRIGHT. — French Prose in the Sixteenth Century. Rabelais; Montaigne. 5 Gr. Total 5.

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1. Messrs. WILKINS and POST. — Elementary Course. 11 Ju., 16 So., 6 Fr. Total 33.

*For Undergraduates and Graduates: —*

5. Mr. WILKINS. — Modern Italian Literature. Prose and Poetry of the Eighteenth and Nineteenth Centuries. 2 Ju., 1 Sp. Total 3.

2. Professor FORD. — Italian Literature of the Fifteenth and Sixteenth Centuries. Torquato Tasso; Ariosto; Machiavelli; Benvenuto Cellini. 3 Gr., 2 Ju., 4 So. Total 9.

10. Professor GRANDGENT. — The Works of Dante, particularly the Vita Nuova and the Divine Comedy. 6 Gr., 5 Se., 1 Ju., 2 So. Total 14.

*Primarily for Graduates: —*

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1. Asst. Professor M. A. POTTER, and Messrs. LINCOLN, HAWKINS, WILKINS, and WHITTEM. — Spanish Grammar, reading, and composition. Modern Spanish Novels and Plays. 1 Se., 8 Ju., 38 So., 25 Fr., 3 Sp. Total 75.

*For Undergraduates and Graduates: —*

5. Professor FORD. — Spanish Prose and Poetry of the Eighteenth and Nineteenth Centuries. Modern Spanish Literature. Composition. 7 Gr., 5 Se., 10 Ju., 5 So., 1 Fr., 3 Sp. Total 31.

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2*a*. Asst. Professor WIENER. — Polish. 1 Ju. Total 1.

4 *hf*. Asst. Professor WIENER. — Introduction to the History of Russian Literature. 5 Se., 7 Ju., 12 So., 1 Law. Total 25.

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*For Undergraduates and Graduates:* —

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6*a* ²*hf*. Professor SCHOFIELD, assisted by Dr. WEBSTER. — The Literary History of England and its Relation to that of the Continent from the beginning to Chaucer. 10 Gr., 15 Se., 11 Ju., 16 So., 3 Fr., 6 Sp. Total 61.

7. Asst. Professor M. A. POTTER. — Tendencies of European Literature in the Renaissance. 4 Gr., 3 Se., 10 Ju., 4 So., 1 Sp., 1 Instr. Total 23.

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25 ¹*hf*. Professor KITTREDGE. — The English and Scottish Popular Ballads.
11 Gr. Total 11.

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‡28 1*hf*. Mr. W. G. Howard. — German Literature in the Sixteenth Century and its relation to English Literature. Brant, Hutten, Luther, Hans Sachs, Fischart. Popular Literature in prose and verse. The Drama.
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20*g*. Professor Grandgent. — The Relations of Provençal Literature to European Literature in other Tongues. 1 Gr. Total 1.

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9*b* 2*hf*. Professor Haskins. — Constitutional History of England from the Great Charter to the Sixteenth Century.
7 Gr., 6 Se., 17 Ju., 5 So., 2 Sp. Total 37.

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9 Gr., 4 Se., 16 Ju., 18 So., 1 Sp., 2 Di. Total 50.

12*a* 1*hf*. Professor Macvane, assisted by Mr. Hemmeon. — English History from the Revolution of 1688 to the Reform of Parliament.
4 Gr., 27 Se., 34 Ju., 34 So., 2 Fr., 5 Sp., 1 Di., 1 Law. Total 108.

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12*b* ²*hf*. Professor MACVANE, assisted by Mr. HEMMEON. — English History since the Reform of Parliament.
5 Gr., 20 Se., 36 Ju., 46 So., 2 Fr., 5 Sp. Total 114.

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20*c*. Professor HASKINS. — Mediaeval Institutions. 1 Gr. Total 1.

20*d*. Asst. Professor COOLIDGE. — Recent History of Europe. 3 Gr. Total 3.

20*e*. Professor CHANNING. — American History. 4 Gr., 1 Di. Total 5.

20*g*. Asst. Professor COOLIDGE and Dr. MERRIMAN. — History of Europe (1525–1530). 3 Gr. Total 3.

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4*b* 2*hf*. Professor G. G. WILSON (Brown University). — International Relations. 4 Gr., 11 Se., 11 Ju., 12 So. Total 38.

11. Asst. Professor MUNRO. — Colonial Governments. 4 Gr., 9 Se., 11 Ju., 10 So., 2 Fr., 2 Sp. Total 38.

14. Professor A. B. HART. — American Diplomacy. Treaties; Applications of International Law; Foreign Policy. 15 Gr., 4 Se., 2 Ju., 1 So. Total 22.

16. Professor STIMSON and Mr. W. H. NELSON. — Tendencies of American Legislation, with an historical view of prototypes in English legislation. 3 Gr., 20 Se., 30 Ju., 27 So., 4 Sp. Total 84.

17. Asst. Professor MUNRO, assisted by Mr. N. Kelley. — Modern Municipal Government. 2 Gr., 11 Se., 23 Ju., 18 So., 2 Fr. Total 56.

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COURSE OF RESEARCH

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6*b* ²*hf*. Professor GAY. — Economic and Financial History of the United States.
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16*a* ¹*hf*. Asst. Professor BULLOCK. — Introduction to Public Finance.
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2 Gr., 11 Se., 16 Ju., 4 So., 1 Sp. Total 34.

18. Mr. W. M. COLE. — Principles of Accounting.
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18 *hf*. Professor CARVER. — Methods of Economic Investigation.
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*B 2hf*. Professor SANTAYANA. — History of Modern Philosophy. 2 Gr., 2 Se., 53 Ju., 71 So., 66 Fr., 26 Sp., 1 Di. Total 221.

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*D 1hf*. Asst. Professor R. B. PERRY. — General Problems of Philosophy. 2 Gr., 2 Se., 23 Ju., 38 So., 11 Fr., 6 Sp. Total 82.

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‡20*c*. Professor ROYCE. — Logical Seminary. Hegel's Dialectical Method.
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2 $^{2}hf$. Dr. Brackett. — Social Ethics. Practical Problems of Public Aid, Charity, and Neighborhood Work.
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2*b* $^{2}hf$. Professor Hanus. — School Administration as a Branch of Municipal Affairs, more particularly in Massachusetts. Contemporary Tendencies and Problems. 2 Gr., 1 Se., 3 Ju., 1 So., 1 Sp. Total 8.

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*For Undergraduates and Graduates:* —

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COURSE OF SPECIAL STUDY

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## German Art

*For Undergraduates and Graduates:* —

1 *hf.* Professor PAUL CLEMEN (University of Bonn). — German and French Art from the Early Middle Ages to the End of the Eighteenth Century.
1 Gr., 1 Se., 3 So., 1 Fr. Total 6.

2 *hf.* Professor PAUL CLEMEN (University of Bonn). — German Art of the Nineteenth Century. 2 Se., 5 Ju., 4 So., 2 Fr. Total 13.

*Primarily for Graduates:* —

SEMINARY COURSE

3 *hf.* Professor PAUL CLEMEN (University of Bonn). — Seminary on Mediaeval German Sculpture, with demonstrations in the Germanic Museum.
1 Gr., 1 So. Total 2.

## Architecture

*For Undergraduates and Graduates:* —

1*a*. Professor H. L. WARREN and Mr. ELLIOTT, assisted by Mr. THOMAS. — Technical and Historical Development of the Ancient Styles, with special reference to Classic Architecture.
7 G.S., 1 Se., 8 Ju., 5 So., 1 Fr., 13 Sp., 2 Sc. Total 37.

1*c*. Professor H. L. WARREN and Mr. ELLIOTT, assisted by Mr. THOMAS. — Technical and Historical Development of Renaissance and Modern Architecture. 3 G.S., 5 Se., 6 Ju., 9 So., 8 Sp., 2 Sc. Total 33.

2*a*. Mr. ELLIOTT, assisted by Mr. THOMAS. — Elementary Architectural Drawing. Elements of Architectural Form. The Orders.
8 G.S., 3 Ju., 4 So., 8 Sp., 2 Sc. Total 25.

2*b*. Asst. Professor MOWLL. — Stereotomy, Shades and Shadows, and Perspective. 5 G.S., 3 Se., 4 Ju., 2 So., 6 Sp. Total 20.

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3*a*. Messrs. Pope and Mower. — Freehand Drawing.
4 G. S., 3 Se., 6 Ju., 10 So., 7 Sp. Total 30.

3*b*. Mr. H. B. Warren. — Freehand Drawing (second course). Mr. Murphy. — Drawing from the Life.
6 G. S., 1 Se., 4 Ju., 5 So., 7 Sp., 4 Sc. Total 27.

4*a*. Asst. Professor Mowll and Mr. Jenney; with lectures on the Principles of Design in Architecture, by Professor H. L. Warren. — Elementary Architectural Design. 4 G. S., 3 Se., 2 Ju., 3 So., 4 Sp. Total 16.

7*c*²*hf*. Dr. Ross and Mr. E. O. Parker. — The Practice of Design.
1 Gr., 6 G.S., 6 Se., 1 Ju., 9 So., 1 Fr., 3 Sp., 2 Sc. Total 29.

*Primarily for Graduates:* —

3*c*. Mr. H. B. Warren. — Freehand Drawing (third course). Mr. Murphy. — Drawing from the Life. 4 G.S., 1 Se., 1 Sp., 1 Sc. Total 7.

3*d*. Messrs. H. B. Warren and Murphy. — Freehand Drawing (fourth course).
1 Gr. Total 1.

4*b*. Professor H. L. Warren and Mr. Elliott. — Architectural Design (second course). 1 Gr., 2 G. S., 1 Se., 1 Ju., 2 Sp., 1 Sc. Total 8.

4*c*. Professor H. L. Warren and Asst. Professor Mowll, with the coöperation, successively, of Messrs. Sturgis and Coolidge. — Architectural Design (third course). 2 G.S., 1 Se., 1 Sp., 1 Sc. Total 5.

4*d*. Professor H. L. Warren and Asst. Professor Mowll, and, successively, Messrs. Sturgis and Coolidge. — Architectural Design (advanced course).
1 Gr. Total 1.

5²*hf*. Mr. Jenney. — Elements of Construction; Materials and Methods.
5 G.S., 2 Ju., 1 So., 3 Sp., 1 Sc. Total 12.

6 *hf*. Mr. Garbutt. — Modelling. 3 G.S., 1 Sp. Total 4.

### Courses of Special Study

20*a*. Professor H. L. Warren. — Competent students who satisfied the instructor of their fitness to pursue advanced work were directed in the study of special periods in the history of architecture.
1 Gr., 2 G.S., 1 Se., 1 Sc. Total 5.

20*b*²*hf*. Dr. Ross. — Advanced Practice in Pure Design or in Representation.
2 Se., 1 Sp. Total 3.

## Landscape Architecture

*For Undergraduates and Graduates:* —

1. Asst. Professor Pray, assisted by Messrs. Cox and Evans. — Principles of Landscape Architecture.
1 Gr., 1 G.S., 9 Se., 12 Ju., 27 So., 2 Fr., 6 Sp., 1 Sc., 1 Bu. Total 60.

*Primarily for Graduates:* —

2. Asst. Professor Pray and Mr. Hubbard, with occasional instruction by Professor Olmsted. — Practice in Design (first course).
2 Sp. Total 2.

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3. Professor OLMSTED and Asst. Professor PRAY. — Practice in Design (second course). 1 G. S., 1 So., 2 Sc. Total 4.

4. Mr. HUBBARD. — Principles of Construction. 1 Sp., 1 Sc. Total 2.

### Music

*For Undergraduates and Graduates:* —

1. Mr. HEILMAN, assisted by Mr. HURLIN. — Harmony. 3 Se., 4 Ju., 8 So., 13 Fr., 6 Sp. Total 34.

2. Mr. HEILMAN. — Counterpoint. 8 So., 1 Fr. 1 Sp. Total 10.

3. Asst. Professor SPALDING. — History of Music from the time of Palestrina to the present day. 1 G.S., 14 Se., 50 Ju., 54 So., 15 Fr., 5 Sp. Total 139

4. Asst. Professor SPALDING and Mr. HEILMAN. — The Appreciation of Music; analytical study of masterpieces from the point of view of the listener. 1 Gr., 4 Se., 11 Ju., 15 So., 3 Fr., 1 Sp. Total 35

5 *hf.* Asst. Professor SPALDING. — Canon and Fugue. 2 So., 1 R. Total 3.

*Primarily for Graduates:* —

‡6. Asst. Professor SPALDING and Mr. HEILMAN. — Instrumentation. 1 Gr., 3 Se., 1 Ju., 1 So., 1 R. Total 7.

‡7. Asst. Professor SPALDING. — Free Composition, with special reference to pianoforte style and ensemble writing. 3 Se., 1 Ju., 1 Sp., 2 R. Total 7.

### Mathematics

*Primarily for Undergraduates:* —

*F.* Asst. Professor WHITTEMORE and Dr. COOLIDGE. — Trigonometry and Plane Analytic Geometry. 1 Gr., 1 Se., 3 Ju., 13 So., 67 Fr., 9 Sp. Total 94.

*A* ²*hf.* Asst. Professor BOUTON. — Logarithms; Plane and Spherical Trigonometry. 1 Se., 6 So., 13 Fr. Total 20.

*C.* Professor BYERLY. — Plane and Solid Analytic Geometry (extended course). 1 Gr., 6 So., 29 Fr., 2 Sp., 1 Sc. Total 39.

*D* ²*hf.* Dr. COOLIDGE. — Algebra. 1 Se., 3 Ju., 18 So., 18 Fr., 1 Sp. Total 41.

*E* ¹*hf.* Asst. Professors BOUTON and WHITTEMORE, and Dr. COOLIDGE. — Solid Geometry. 2 Se., 5 Ju., 18 So., 42 Fr., 10 Sp., 4 Sc. Total 81.

*H* ²*hf.* Asst. Professor HUNTINGTON. — A ½ Brief Survey of Mathematics for the General Student. 2 Se., 5 Ju., 11 So., 22 Fr., 2 Sp. Total 42.

1 ¹*hf.* Asst. Professor BOUTON. — Solid Analytic Geometry. 1 Gr., 2 So. Total 3.

2. Professor OSGOOD. — Differential and Integral Calculus (first course). 5 Gr., 2 Se., 16 Ju., 24 So., 3 Fr., 1 Sc. Total 51.

4. Professor OSGOOD. — The Elements of Mechanics. 6 Gr., 3 Se., 9 Ju., 5 So. Total 23.

*For Undergraduates and Graduates:* —

3. Professor BÔCHER. — Introduction to Modern Geometry and Modern Algebra. 6 Gr., 2 Se., 1 Ju., 3 So. Total 12.

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5. Professor Byerly. — Differential and Integral Calculus (second course). 10 Gr., 2 Se., 7 Ju., 1 So., 1 Sp. Total 21.

12 1*hf*. Professor Osgood. — Infinite Series and Products. 5 Gr., 2 Se. Total 7.

14*a* 2*hf*. Professor Bôcher. — Algebra. The Properties of Polynomials; Invariants. 10 Gr., 1 Se., 1 Ju. Total 12.

18 2*hf*. Asst. Professor Bouton. — The Elementary Theory of Differential Equations. 7 Gr., 2 Ju., 1 Sp. Total 10.

6. Professor Bôcher. — Vector Analysis and Quaternions. 11 Gr., 2 Se., 2 Ju., 1 Sp. Total 16.

32*a* 1*hf*. Asst. Professor Whittemore. — Celestial Mechanics. 1 Se. Total 1.

*Primarily for Graduates:* —

‡13. Asst. Professor Whittemore. — The Theory of Functions (introductory course). 8 Gr., 2 Se. Total 10.

‡7. Dr. Coolidge. — Algebraic Plane Curves. 1 Gr., 1 Ju. Total 2.

‡10. Professors Byerly and B. O. Peirce. — Trigonometric Series. Introduction to Spherical Harmonics. The Potential Function. 8 Gr., 1 G.S., 1 R. Total 10.

‡17 2*hf*. Professor Osgood. — The Theory of Functions (advanced course). Functions of a Complex Variable, defined by Definite Integrals. 9 Gr. Total 9.

‡31 1*hf*. Professor Bôcher. — Definite Integrals and Integral Equations. 4 Gr. Total 4.

‡25. Asst. Professor Bouton. — Geometrical Transformations, with special reference to the work of Sophus Lie. 9 Gr. Total 9.

### Courses of Reading and Research

*Reading Course*

‡20*a*. Asst. Professor Whittemore. — Goursat's *Cours d'Analyse*. 2 Gr., 2 Se. Total 4.

*Courses of Research*

‡20*d*. Professor Osgood. — Topics in the Theory of Functions. 4 Gr. Total 4.

‡20*e*. Professor Bôcher. — Topics in the Theory of Differential Equations. 1 Gr., 1 R. Total 2.

‡20*g* 1*hf*. Asst. Professor Whittemore. — Topics in Differential Geometry. 1 Gr. Total 1.

### Astronomy

*Primarily for Undergraduates:* —

1 1*hf*. Professor Willson, assisted by Messrs. Risley and Serviss. — Descriptive Astronomy. 2 Se., 11 Ju., 10 So., 7 Fr., 3 Sp. Total 33.

2 2*hf*. Professor Willson. — Practical Astronomy. Application of Astronomy to Navigation and Exploration. 2 Se., 6 Ju., 6 So., 3 Fr., 1 Sp. Total 18.

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*For Undergraduates and Graduates:* —

3. Professor WILLSON. — Practical Astronomy. Portable and fixed instruments. 1 Gr., 1 Ju. Total 2.

*Primarily for Graduates:* —

5. Professor WILLSON. — Practical Astronomy. Instruments of the fixed observatory. 1 Se. Total 1.

## Physics

*Primarily for Undergraduates:* —

*B*. Professor HALL, Asst. Professor G. W. PIERCE, Dr. J. M. ADAMS, and Mr. L. A. BABBITT. — Elementary Course.
1 Se., 5 Ju., 19 So., 48 Fr., 15 Sp., 4 Sc. Total 92.

*C*. Professor SABINE, Dr. H. W. MORSE, Asst. Professor LYMAN, and Mr. HAYES. — Experimental Physics. Mechanics, Sound, Light, Magnetism, and Electricity.
4 Gr., 2 G. S., 8 Se., 13 Ju., 51 So., 75 Fr., 18 Sp., 15 Sc. Total 186.

11 [1]*hf*. Dr. H. W. MORSE. — The Theory of Primary and Secondary Batteries.
7 Se., 2 Ju., 1 So. Total 10.

*For Undergraduates and Graduates:* —

2. Professor SABINE and Asst. Professor LYMAN. — Light.
4 Gr., 1 Ju., 2 So. Total 7.

3. Professor B. O. PEIRCE and Dr. H. N. DAVIS. — Electrostatics, Electrokinematics, and parts of Electromagnetism.
4 Gr., 2 G. S., 3 Se., 5 Ju., 5 So., 1 Fr., 1 Sp., 7 Sc. Total 28.

12 [1]*hf*. Asst. Professor LYMAN. — Radioactivity and Electric Conduction in Gases with special reference to the Theory of Ions.
4 Gr., 1 G.S., 3 Se., 6 Ju., 6 So., 1 Fr. Total 21.

17 [2]*hf*. Asst. Professor G. W. PIERCE. — Electric Waves and their Application to Wireless Telegraphy.
1 Gr., 1 G.S., 3 Se., 2 Ju., 5 So., 1 Fr., 1 Sc. Total 14.

4. Professor TROWBRIDGE, Asst. Professors G. W. PIERCE and LYMAN. — Magnetism, Electromagnetism, and Electrodynamics.
4 Gr., 2 G.S., 3 Se., 6 Sc. Total 15.

5. Professor SABINE. — Light. 3 Gr. Total 3.

6*a* [1]*hf*. Professor HALL and Dr. H. N. DAVIS. — Elements of Thermodynamics.
1 Gr., 1 Se., 1 Ju., 1 So. Total 4.

14 [2]*hf*. Dr. H. W. MORSE. — The Theory of Photography.
1 Gr., 4 Se., 1 Ju., 3 So., 1 Fr. Total 10.

*Primarily for Graduates:* —

‡10. Professor B. O. PEIRCE. — The Mathematical Theory of Electricity and Magnetism (second course). 2 Gr. Total 2.

### COURSES OF RESEARCH

20*b*. Professor B. O. PEIRCE. — Electricity and Magnetism. 3 Gr. Total 3.

20*d*. Professor SABINE. — Light and Heat. 5 Gr. Total 5.

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**20*e*.** Asst. Professor G. W. PIERCE. — Radiation and Electromagnetic Waves.
2 Gr., 1 G.S. **Total 3.**

**20*f*² *hf*.** Dr. H. W. MORSE. — Molecular Physics. 1 Gr. **Total 1.**

## Chemistry

*Primarily for Undergraduates: —*

1. Professor C. L. JACKSON, Dr. CLARKE, and Messrs. G. L. KELLEY, BURGESS, CLARK, DILLINGHAM, ELDRIDGE, MABEE, RIEGEL, and TEMPLE. — Descriptive Inorganic Chemistry.
1 G.S., 3 Se., 22 Ju., 60 So., 168 Fr., 31 Sp., 17 Sc. **Total 302.**

2 ¹*hf*. Asst. Professor TORREY and Mr. WELLMAN. — Organic Chemistry (elementary course). 3 Gr., 15 Se., 22 Ju., 39 So., 3 Fr., 7 Sp. **Total 89.**

3. Professor SANGER, and Messrs. WHITNEY, BIGELOW, HUNTER, KAVENAGH, and TREADWELL. — Qualitative Analysis.
2 Gr., 1 G.S., 10 Se., 18 Ju., 48 So., 1 Fr., 5 Sp., 3 Sc. **Total 88.**

*For Undergraduates and Graduates: —*

4. Asst. Professor BAXTER and Mr. BOYLSTON. — Quantitative Analysis, gravimetric and volumetric.
3 Gr., 2 G.S., 9 Se., 10 Ju., 6 So., 3 Sp. **Total 33.**

8 ²*hf*. Professor RICHARDS and Mr. FREVERT. — The Historical Development of Chemical Theory. Elementary Physical Chemistry.
4 Gr., 8 Se., 12 Ju., 24 So., 3 Fr., 4 Sp., 1 Sc. **Total 56.**

11. Professor SANGER. — Industrial Chemistry.
6 Gr., 15 Se., 7 Ju., 2 So., 1 Sp., 4 Sc. **Total 35.**

9 ¹*hf*. Asst. Professor BAXTER and Mr. JESSE. — Advanced Quantitative Analysis. 4 Gr., 1 Se., 2 Ju., 1 So., 1 Sp., 3 Sc. **Total 12.**

10 ²*hf*. Asst. Professor BAXTER and Mr. JESSE. — Gas Analysis.
4 Gr., 1 G.S., 1 Se., 3 Ju., 1 Sp., 4 Sc. **Total 14.**

5. Asst. Professor TORREY and Mr. ZANETTI. — The Carbon Compounds.
10 Gr., 7 Se., 10 Ju., 1 So., 2 Sp., 2 Sc. **Total 32.**

5*a hf*. Asst. Professor TORREY and Mr. ZANETTI. — The Carbon Compounds.
8 Gr., 6 Se., 9 Ju., 2 So., 2 Sp., 2 Sc. **Total 29.**

15 ²*hf*. Dr. HENDERSON. — General Biological Chemistry.
4 Gr., 9 Se., 14 Ju., 2 Sp., 2 Sc. **Total 31.**

*Primarily for Graduates: —*

6. Professor RICHARDS and Mr. FREVERT. — Physical Chemistry.
8 Gr., 5 Se., 2 Sc., 1 Med. **Total 16.**

12 ¹*hf*. Asst. Professor BAXTER. — Photochemistry, including the use of Optical Instruments in Chemistry. 3 Gr., 1 Se., 2 Sc. **Total 6.**

7 ²*hf*. Mr. FREVERT. — Electrochemistry. 3 Gr., 2 Se., 1 Sc. **Total 6.**

13 ²*hf*. Mr. FREVERT. — Experimental Electrochemistry.
2 Gr., 1 Se., 1 Sc. **Total 4.**

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COURSES OF RESEARCH.

20*a*. Professor RICHARDS. — Inorganic Chemistry, including Determination of Atomic Weights. 2 Gr. Total 2.

20*b*. Professor C. L. JACKSON. — Organic Chemistry.
3 Gr., 1 Se., 1 Sc. Total 5.

20*c*. Asst. Professor TORREY. — Organic Chemistry.
5 Gr., 2 Se., 2 Ju., 1 So., 1 Sc. Total 11.

20*d*. Professor RICHARDS. — Physical Chemistry, including Electrochemistry.
9 Gr. Total 9.

20*e*. Professor SANGER. — Inorganic and Analytical Chemistry.
2 Gr., 1 Sc. Total 3.

20*f*. Asst. Professor BAXTER. — Inorganic Chemistry, including Determination of Atomic Weights. 6 Gr., 1 So. Total 7.

## Engineering

*Primarily for Undergraduates:* —

1*e*. Asst. Professor LOVE and Mr. DOYEN. — Trigonometry, Algebra, and Analytic Geometry.
1 Se., 1 Ju., 5 So., 22 Fr., 18 Sp., 11 Sc. Total 58.

1*a* $^{1}hf$. Asst. Professor LOVE and Mr. DOYEN. — Algebra.
1 G.S., 3 Ju., 8 So., 20 Fr., 4 Sp., 1 Sc. Total 37.

1*b* $^{1}hf$. Asst. Professor LOVE and Mr. DOYEN. — Trigonometry.
1 Se., 6 Ju., 10 So., 19 Fr., 9 Sp., 3 Sc. Total 48.

1*d* $^{2}hf$. Asst. Professor LOVE and Mr. DOYEN. — Analytic Geometry.
4 Ju., 14 So., 30 Fr., 10 Sp., 5 Sc. Total 63.

1*c*. Asst. Professor HUNTINGTON, Dr. H. N. DAVIS, and Messrs. SHEPARD and WATKEYS. — Differential and Integral Calculus.
1 G.S., 2 Se., 10 Ju., 33 So., 2 Fr., 6 Sp., 18 Sc. Total 72.

3*a*. Asst. Professor KENNEDY, and Messrs. A. E. NORTON and THORNDIKE. — Mechanical Drawing.
1 Gr., 2 G.S., 6 Se., 10 Ju., 27 So., 60 Fr., 25 Sp., 13 Sc. Total 144.

3*b* $^{1}hf$. Messrs. A. E. NORTON and THORNDIKE. — Descriptive Geometry.
3 Se., 10 Ju., 25 So., 4 Fr., 6 Sp., 18 Sc. Total 66.

3*d* $^{2}hf$. Asst. Professor KENNEDY, and Messrs. A. E. NORTON and THORNDIKE. — Mechanism. Study of Gearing and Mechanical Movements.
1 G.S., 5 Se., 10 Ju., 25 So., 4 Fr., 8 Sp., 17 Sc. Total 70.

4*a*. Asst. Professor HUGHES, assisted by Mr. J. C. BARNES (North Georgia Agricultural College) and other assistants. — Plane and Topographical Surveying. (See page 88.)
5 G.S., 4 Se., 20 Ju., 37 So., 25 Fr., 13 Sp., 12 Sc. Total 116.

10*a*. Messrs. F. R. PLEASONTON and MARKHAM. — Chipping, Filing, and Fitting. (See page 89.)
2 Gr., 2 G.S., 1 Se., 5 Ju., 7 So., 7 Fr., 6 Sp., 4 Sc. Total 34.

10*b*. Messrs. F. R. PLEASONTON and MARKHAM. — Blacksmithing. (See page 89.)
2 Gr., 2 G.S., 1 Se., 4 Ju., 6 So., 7 Fr., 6 Sp., 6 Sc. Total 34.

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10*c*. Messrs. F. R. Pleasonton and Markham. — Pattern-making and Foundry Practice. (See page 89.)
2 Gr., 1 G.S., 1 Se., 5 Ju., 5 So., 7 Fr., 5 Sp., 6 Sc. Total 32.

10*e*. Messrs. F. R. Pleasonton and Markham. — Machine Shop Practice. (See page 89.)
2 Gr., 1 G.S., 1 Se., 5 Ju., 7 So., 7 Fr., 5 Sp., 5 Sc. Total 33.

5*b* $^{1}hf$. Professor L. J. Johnson and Mr. Nichols. — Elementary Statics. Graphic and Algebraic Methods.
6 G.S., 9 Se., 13 Ju., 42 So., 3 Fr., 12 Sp., 19 Sc. Total 104.

5*e* $^{2}hf$. Asst. Professor Huntington, and Messrs. Barton and Ransom. — Elementary Kinematics and Kinetics.
2 G.S., 3 Se., 11 Ju., 27 So., 1 Fr., 7 Sp., 16 Sc. Total 67.

5*d* $^{2}hf$. Mr. A. E. Norton. — Resistance of Materials (introductory course for students of Architecture). Elementary Structural Design.
2 G.S., 1 Ju., 5 So., 1 Sp., 1 Sc. Total 10.

11*a* $^{2}hf$. Asst. Professor Marks, and Messrs. Markham and Ransom. — Steam Machinery (introductory course).
1 Gr., 6 G.S., 11 Se., 15 Ju., 42 So., 5 Fr., 14 Sp., 21 Sc. Total 115.

*For Undergraduates and Graduates : —*

4*d*. Asst. Professor Hughes, assisted by Mr. J. C. Barnes (North Georgia Agricultural College) and other assistants. — Railroad Engineering (first course). (See page 88.)
3 G. S., 4 Se., 17 Ju., 36 So., 17 Fr., 12 Sp., 12 Sc. Total 101.

5*a*. Professor Hollis, Asst. Professor Huntington, and Mr. Forté. — Applied Mechanics, including Resistance of Materials.
4 G.S., 11 Se., 13 Ju., 4 So., 3 Sp., 23 Sc. Total 58.

6*a* $^{2}hf$. Asst. Professor Hughes and Mr. McKay. — Hydraulics and Hydraulic Motors. 9 G. S., 8 Se., 8 Ju., 1 So., 1 Sp., 21 Sc. Total 48.

12*b* $^{1}hf$. Asst. Professor Marks and Mr. McDowell. — Elements of Thermodynamics. Theory of Heat Engines.
1 Gr., 9 G. S., 7 Se., 8 Ju., 3 So., 2 Sp., 21 Sc. Total 51.

13*a*. Asst. Professor Marks, and Messrs. McDowell and Pleasonton. — Engineering Laboratory. Introductory course in experimental methods.
1 Gr., 7 G. S., 7 Se., 9 Ju., 3 So., 21 Sc. Total 48.

14*a*. Asst. Professor Kennedy. — Machine Design (introductory course).
1 G.S., 4 Se., 6 Ju., 3 So., 12 Sc. Total 26.

16*c* $^{1}hf$. Professor Kennelly, and Messrs. Whiting and Crosse. — Direct Current Dynamo-Electric Machinery.
2 Gr., 8 G.S., 11 Se., 9 Ju., 5 So., 3 Sp., 20 Sc. Total 53.

16*g* $^{2}hf$. Professor Kennelly, and Messrs. Whiting and Crosse. — Elementary Alternating Currents and Alternating Current Machinery.
1 Gr., 2 G. S., 7 Se., 5 Ju., 1 So., 18 Sc. Total 34.

*Primarily for Graduates : —*

4*e* $^{2}hf$. Asst. Professor Hughes. — Road Engineering.
6 G. S., 3 Se., 2 Ju., 1 Fr., 7 Sc. Total 19.

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*4f* [1]*hf*. Asst. Professor HUGHES. — Railroad Engineering (second course). Problems in railroad construction and maintenance.
4 G. S., 5 Se., 5 Ju., 2 So., 1 Fr., 1 Sp., 8 Sc. Total 26.

*5f*. Professor L. J. JOHNSON. — Applied Mechanics (second course). Problems involved in the design of Bridges and Buildings.
6 G. S., 3 Se., 1 Ju., 1 So., 8 Sc. Total 19.

*5g*[1]. Professor HOLLIS. — Applied Mechanics (second course). Problems involved in the design of Machinery and Boilers.
1 So., 5 Sc. Total 6.

*6c* [1]*hf*. Asst. Professor HUGHES. — Water Supply and Sanitary Engineering.
7 G. S., 3 Se., 2 So., 9 Sc. Total 21.

*6d*[2]*hf*. Mr. SAFFORD. — Hydraulic Measurement. River, Harbor, Canal and Irrigation Works. 5 G. S., 3 Se., 1 So., 7 Sc. Total 16.

*7a*. Professor L. J. JOHNSON. — Bridges and Buildings. Design of Framed Structures. 7 G. S., 4 Se., 1 Ju., 1 So., 8 Sc. Total 21.

*8a* [1]*hf*. Professor L. J. JOHNSON and Asst. Professor HUGHES. — Building Stones, Masonry and Foundations.
10 G. S., 6 Se., 3 Ju., 2 So., 14 Sc. Total 35.

*12a* [2]*hf*. Asst. Professor MARKS. — Efficiency and Economics of Heat Engines.
5 Sc. Total 5.

*13b*[2]. Professor HOLLIS, Asst. Professor MARKS, and Mr. WITHINGTON. — Engineering Laboratory (second course). 5 Sc. Total 5.

*14b*[1]. Professor HOLLIS and Mr. WITHINGTON. — Machine Design (second course). Study and design of steam machinery. 1 Gr., 4 Sc. Total 5.

*16e*. Professor ADAMS and Mr. R. D. THOMSON. — Alternating Currents and Alternating Current Machinery. 3 G. S., 3 Se., 1 So., 1 Sp., 7 Sc. Total 15.

*16d*. Professor ADAMS and Mr. R. D. THOMSON. — Dynamo Design.
4 G. S., 3 Se., 1 So., 6 Sc. Total 14.

*16f*. Mr. WHITING. — Electrical Engineering Laboratory. Dynamo Testing; Electric Light Photometry; Storage Batteries; Electrochemistry.
3 G. S., 3 Se., 1 So., 7 Sc. Total 14.

*17a* [1]*hf*. Professor KENNELLY. — Electric Transmission and Distribution of Power. 7 G. S., 4 Se., 1 So., 6 Sc. Total 18.

*17b* [2]*hf*. Professor KENNELLY. — Telegraphy and Telephony.
4 G. S., 4 Se., 2 Ju., 1 So., 1 Sp., 6 Sc. Total 18.

*21*[2]. Conference on Engineering Subjects.
8 G. S., 2 Se., 1 Ju., 2 So., 1 Sp., 7 Sc. Total 21.

*22*[2]. Asst. Professor WYMAN. — Contracts and Specifications. General Principles of Common Law governing Construction Contracts.
9 G. S., 5 Se., 4 Ju., 1 So., 1 Fr., 25 Sc., 1 Bu. Total 46.

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### Courses in Special Fields

*Primarily for Graduates: —*

20*a*. Professor Adams. — Alternating Current Machinery. 1 G.S. Total 1.

20*c*. Professor Kennelly. — Dynamo-Electric Machinery. 1 G.S. Total 1.

20*d*. Professor L. J. Johnson. Reinforced Concrete. 3 G.S., 1 Ju. Total 4.

20*h*. Asst. Professor Marks. — Internal Combustion Motors. 3 G.S. Total 3.

20*k*. Professor Hollis. — Elasticity of Materials. 2 G.S. Total 2.

## Forestry

*None of the courses in Forestry can be counted towards the degree of A.B.*

*For Undergraduates and Graduates: —*

1*a* [1]*hf*. Asst. Professor Fisher. — Elements of Silviculture.
3 G.S., 3 Se., 3 Ju., 2 So., 3 Sp., 2 Sc. Total 16.

1*b* [2]*hf*. Asst. Professor Fisher. — Practical Silviculture.
3 G.S., 3 Se., 1 Ju., 1 So., 1 Sp., 2 Sc. Total 11.

2. Mr. MacKaye. — Forest Measurements. 5 G.S., 2 Se., 2 Sc. Total 9.

3. Mr. Jack. — Forest Botany.
3 G.S., 1 Se., 1 Ju., 2 So., 1 Fr., 2 Sp. Total 10.

4 [2]*hf*. Mr. Jack. — Forest Protection.
1 Gr., 3 G.S., 2 Se., 1 Ju., 4 So., 2 Fr., 3 Sp. Total 16.

5 [1]*hf*. Mr. MacKaye. — Forest History. 5 G.S. Total 5.

6[2]. Asst. Professor Cary. — Lumbering. 5 G.S., 1 Sp. Total 6.

7. Asst. Professor Fisher and Mr. MacKaye. — Forest Management.
5 G.S. Total 5.

8 [2]*hf*. Mr. MacKaye. — Forest Technology. 6 G.S., 1 Sp. Total 7.

## Botany

*Primarily for Undergraduates: —*

1 [2]*hf*. Professor Goodale, assisted by Messrs. Hotson, Graff, Conser, and Parshley. — Botany (introductory course).
2 Gr., 1 G.S., 4 Se., 17 Ju., 18 So., 56 Fr., 10 Sp., 1 Sc., 1 Bu. Total 110.

2 [1]*hf*. Professor Thaxter, assisted by Messrs. Hotson and Graff. — Morphology of Plants. 4 Gr., 5 Se., 8 Ju., 11 So., 2 Fr., 6 Sp., 2 Sc. Total 38.

*For Undergraduates and Graduates: —*

3*a* [1]*hf*. Professor Jeffrey, assisted by Mr. R. B. Thomson. — Morphology, Histology, and Cytology of Flowering Plants.
1 Gr., 2 Se., 1 Ju., 2 So., 1 Sp., 3 Sc. Total 10.

3*b* [2]*hf*. Professor Jeffrey, assisted by Mr. R. B. Thomson. — Ecology and Physiology of Flowering Plants. 2 Gr., 2 Se., 1 Ju., 2 Sp., 3 Sc. Total 10.

4 [2]*hf*. Professor Thaxter, assisted by Mr. Hotson. — The Algae, Liverworts, and Mosses. 3 Gr., 1 Se., 1 Ju., 2 So. Total 7.

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5. Professor GOODALE and Mr. AMES. — Outlines of Economic Botany. 5 Ju., 2 So., 1 Sp., 1 Bu. Total 9.

8 *1hf.* Professor JEFFREY, assisted by Mr. R. B. THOMSON. — The Anatomy, Development, and Phylogeny of the Tracheate Zoidogamia (Pteridophyta, Pteridospermae, Fossil, and Lower Gymnosperms). 2 Gr., 2 Se. Total 4.

*Primarily for Graduates: —*

COURSES OF RESEARCH

20*a*. Professors GOODALE and JEFFREY. — Experimental Vegetable Physiology. Economic Botany, with special reference to Tropical Plants. Structure and Development of Vascular Plants. 3 Gr., 1 G.S., 2 Se. Total 6.

20*b*. Professors FARLOW and THAXTER. — Structure and Development of Cryptogams. 2 Gr. Total 2.

20*c*. Professor B. L. ROBINSON. — Taxonomy of Phanerogams. 1 Gr. Total 1.

20*d*. Asst. Professor FERNALD. — Researches in Geographic Botany. 1 Se. Total 1.

## Zoölogy

*Primarily for Undergraduates: —*

1 *1hf.* Professor G. H. PARKER, assisted by Mr. PEARSE and others. — Zoölogy (introductory course). 4 Gr., 5 Se., 12 Ju., 20 So., 42 Fr., 7 Sp. Total 90.

2 *2hf.* Asst. Professor W. E. CASTLE, assisted by Messrs. CONGDON and DAY. — Morphology of Animals. 2 Gr., 2 Se., 8 Ju., 11 So., 6 Fr., 3 Sp. Total 32.

*For Undergraduates and Graduates: —*

3. Dr. H. W. RAND and Mr. HARGITT. — Comparative Anatomy of Vertebrates. 5 Gr., 6 Se., 5 Ju., 2 So., 1 Sp. Total 19.

4 *1hf.* Professor MARK and Dr. H. W. RAND. — Microscopical Anatomy. 5 Gr., 2 Se., 3 Ju., 1 So., 1 Sp. Total 12.

6 *2hf.* Professor MARK and Dr. H. W. RAND. — Embryology of Vertebrates. Organogeny. 6 Gr., 1 Se., 2 Ju., 1 Sp. Total 10.

9*a* *1hf.* Asst. Professor R. T. JACKSON, assisted by Mr. LAHEE. — Fossil Invertebrates. 5 Gr., 1 R. Total 6.

11*a* *1hf.* Asst. Professor W. E. CASTLE. — Variation, Heredity, and the Principles of Animal Breeding. 7 Gr., 1 Se., 3 Ju., 4 So., 1 Bu., 1 R. Total 17.

11*b* *2hf.* Asst. Professor W. E. CASTLE. — Natural History of the Domesticated Animals. 8 Gr., 3 Se., 4 Ju., 5 So., 1 Bu. Total 21.

13 *1hf.* Professor G. H. PARKER. — Comparative Histology. Epithelial and Nervous Tissues. 8 Gr., 1 Se. Total 9.

*Primarily for Graduates: —*

15 *2hf.* Professor G. H. PARKER. — The Structure and Functions of the Nervous System and its Relation to Animal Habits. Sense Organs. 9 Gr. Total 9.

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COURSES OF RESEARCH

20*a*. Professor MARK. — Embryology and Cytology. 7 Gr. Total 7.

20*c*. Professor G. H. PARKER. —The Structural and Functional Basis of Animal Reactions. 3 Gr. Total 3.

20*d hf*. Asst. Professor W. E. CASTLE. — Investigation of the Factors Involved in Evolution. 1 Ju. Total 1.

20*e*. Dr. H. W. RAND. — Investigation of Developmental and Growth Processes. Comparative Anatomy of Vertebrates. 1 Gr. Total 1.

## Geology

## GEOLOGY AND GEOGRAPHY

GEOLOGY IN GENERAL

*Primarily for Undergraduates: —*

4 [1]*hf*. Professor WOLFF and Asst. Professor WOODWORTH, assisted by Messrs. EGGLESTON and LAHEE. — Dynamical and Structural Geology.
2 Gr., 4 G. S., 4 Se., 19 Ju., 26 So., 16 Fr., 9 Sp., 10 Sc., 5 Bu. Total 95.

5 [2]*hf*. Asst. Professor WOODWORTH, assisted by Mr. EGGLESTON. — Historical Geology. 3 G. S., 4 Se., 7 Ju., 13 So., 5 Fr., 7 Sp., 8 Sc., 1 Bu. Total 48.

*For Undergraduates and Graduates: —*

8 [1]*hf*. Asst. Professor WOODWORTH and Dr. MANSFIELD. — Advanced General Geology. 2 Gr., 4 Se., 3 Ju., 2 So., 1 Sp. Total 12.

16 [2]*hf*. Asst. Professor WOODWORTH. — Glacial Geology.
2 Se., 3 Ju., 3 So., 1 Fr., 2 Sp. Total 11.

12. Dr. MANSFIELD. — Areal Geology in the Vicinity of Boston.
1 Gr., 1 Sc. Total 2.

*Primarily for Graduates: —*

20*c*. Professors WOLFF and H. L. SMYTH, and Asst. Professor WOODWORTH. — Geological Investigation in the Field and Laboratory.
3 Gr. Total 3.

ECONOMIC GEOLOGY

*For Undergraduates and Graduates: —*

10. Professor H. L. SMYTH, assisted by Mr. WEEKS. — Mining Geology. The origin and geological relations of ore deposits.
1 Gr., 2 G. S., 5 Se., 7 Ju., 3 So., 1 Fr., 4 Sp., 2 Sc. Total 25.

*Primarily for Graduates: —*

20*b*. Professor H. L. SMYTH. — Mining Geology (research course).
1 Gr. Total 1.

PALAEONTOLOGY

*For Undergraduates and Graduates: —*

11. Asst. Professor R. T. JACKSON, assisted by Mr. LAHEE. — Palaeontology.
2 Gr., 1 Se., 1 So., 1 Sc. Total 5.

15. Asst. Professor R. T. JACKSON. — Advanced Historical Geology.
1 Gr., 1 Sc. Total 2.

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*Primarily for Graduates : —*

20*d*. Asst. Professor R. T. JACKSON. — Palaeontological Investigation.
1 Gr. Total 1.

GEOGRAPHY

*Primarily for Undergraduates : —*

*A* 1*hf*. Asst. Professor D. W. JOHNSON, assisted by Mr. VARNEY.—Physiography of the Lands.
2 G. S., 3 Se., 4 Ju., 6 So., 19 Fr., 10 Sp., 1 Sc., 3 Bu. Total 48.

*C* 2*hf*. Asst. Professor D. W. JOHNSON and Mr. VARNEY. — Economic Geography.
1 Gr., 1 G. S., 8 Se., 9 Ju., 10 So., 7 Fr., 3 Sp., 1 Sc., 1 Bu. Total 41.

*For Graduates and Undergraduates : —*

2 1*hf*. Asst. Professor WARD. — Geography of South America. 1 Ju. Total 1.

*Primarily for Graduates : —*

‡20*a*. Asst. Professor D. W. JOHNSON. — Physiography (advanced course).
1 Gr., 1 Se., 1 Ju. Total 3.

METEOROLOGY AND CLIMATOLOGY

*Primarily for Undergraduates : —*

*B* 2*hf*. Asst. Professor WARD, assisted by Mr. VARNEY. — Meteorology (elementary course).
1 Gr., 4 Se., 6 Ju., 12 So., 27 Fr., 9 Sp., 4 Bu. Total 63.

*For Undergraduates and Graduates : —*

1 1*hf*. Asst. Professor WARD. — Climatology of North America.
2 Se., 1 So., 2 Sc. Total 5.

19 1*hf*. Asst. Professor WARD. — General Climatology. 2 Gr., 1 Ju. Total 3.

*Primarily for Graduates : —*

20*e*. Asst. Professor WARD. — Climatology (research course).
3 Gr., 1 Ju. Total 4.

## Mineralogy and Petrography

*Primarily for Undergraduates : —*

2. Asst. Professor PALACHE, assisted by Mr. MERWIN. — Mineralogy (including Crystallography, Physical and Chemical Mineralogy, and Descriptive Mineralogy). 4 G. S., 11 Se., 11 Ju., 8 So., 2 Fr., 5 Sp., 1 Sc. Total 42.

*For Undergraduates and Graduates : —*

8 2*hf*. Professor WOLFF. — Optical Crystallography. 2 Gr. Total 2.

12. Professor WOLFF, assisted by Mr. MERWIN. — Petrography.
1 Gr., 4 G. S., 1 Ju. Total 6.

*Primarily for Graduates : —*

14 2*hf*. Professor WOLFF. — Advanced Petrography.
1 Gr., 1 Sp., 1 Sc. Total 3.

COURSE OF RESEARCH

‡20. Professor WOLFF and Asst. Professor PALACHE. — Research in Mineralogy, Crystallography or Petrography. 1 Gr. Total 1.

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## Mining and Metallurgy

*Primarily for Undergraduates:—*

16 $^{1}hf.$ Professor PETERS. — Introduction to Mining and Metallurgy.
37 Se., 38 Ju., 35 So., 7 Fr., 2 Sp. Total 119.

1 $^{2}hf.$ Professor H. L. SMYTH and Asst. Professor RAYMER, assisted by Mr. WEEKS. — Elements of Mining. Prospecting and Exploring; Breaking Ground; Hydraulic and Open-pit Mining; Stamp-milling and Ore-concentration. 3 G. S., 5 Se., 7 Ju., 5 So., 1 Fr., 5 Sp., 2 Sc. Total 28.

6 $^{2}hf.$ Asst. Professor C. H. WHITE, assisted by Mr. L. O. HOWARD. — Metallurgical Chemistry. 1 G. S., 1 Se., 5 Ju., 3 So., 1 Fr., 2 Sp., 1 Sc. Total 14.

9 $^{2}hf.$ Professors SAUVEUR and PETERS, and Mr. H. M. BOYLSTON. — General Metallurgy. 1 G. S., 5 Se., 12 Ju., 19 So., 2 Fr., 7 Sp., 3 Sc. Total 49.

10 $^{1}hf.$ Asst. Professor RAYMER, assisted by Mr. L. O. HOWARD. — Fire Assaying.
1 G. S., 5 Se., 8 Ju., 5 So., 1 Fr., 3 Sp., 2 Sc. Total 25.

*For Undergraduates and Graduates:—*

2 $^{1}hf.$ Professor SAUVEUR and Mr. H. M. BOYLSTON. — Metallurgy of Iron and Steel. 2 Gr., 9 G. S., 10 Se., 8 Ju., 9 So., 5 Sp., 12 Sc. Total 55.

3 $^{2}hf.$ Professor PETERS, assisted by Mr. L. O. HOWARD. — Metallurgy of Copper, Lead, Zinc, and the Minor Metals, and of the Precious Metals in connection with Copper and Lead.
1 Gr., 4 G. S., 2 Se., 3 Ju., 4 So., 2 Sp. Total 16.

4 $^{2}$. Asst. Professor RAYMER. — Ore-dressing, Concentration, and Milling.
5 G. S., 2 Se., 1 So. Total 8.

5 $^{1}$. Professor H. L. SMYTH, assisted by Mr. WEEKS. — Metal and Coal Mining; Exploitation. 4 G. S., 2 Se., 1 Ju., 1 So. Total 8.

7. Asst. Professor C. H. WHITE. — Metallurgical Chemistry (advanced course).
1 Gr., 2 Se., 1 Ju. Total 4.

11 $^{2}hf.$ Asst. Professor RAYMER. — Mining Plant.
3 G. S., 2 Se., 1 So., 1 Sc. Total 7.

12. Asst. Professor C. H. WHITE. — Mining. The study of mining operations.
4 G. S., 1 Se., 4 Ju., 3 So., 1 Fr., 1 Sp., 1 Sc. Total 15.

14 $^{2}hf.$ Professor SAUVEUR and Mr. H. M. BOYLSTON. — Metallography.
1 Gr., 1 G. S., 4 Se., 1 So., 1 Ju. Total 8.

15 $^{2}hf.$ Professor PETERS. — Metallurgy of Zinc, Nickel, Tin, Mercury, and the Minor Metals. 1 Gr., 4 G. S., 2 Se., 1 Ju., 1 So. Total 9.

*Primarily for Graduates:—*

8 $^{1}$. Asst. Professor C. H. WHITE. — Leaching Processes for Gold and Silver Ores. 3 G. S. Total 3.

17 $^{1}$. Asst. Professor RAYMER. — Mine Surveying. 2 G. S. Total 2.

*21 $^{1}$. Asst. Professor RAYMER. — Mining and Milling Machinery.
1 G. S., 1 Se. Total 2.

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22[1]. Asst. Professors RAYMER and C. H. WHITE. — Problems in the Treatment of Ores. 3 G. S. Total 3.

24[2]. Professor H. L. SMYTH. — Mine Examination and Reports. 3 G. S. Total 3.

26 [2]*hf*. Professor PETERS. — Advanced Course in the Metallurgy of Copper, Lead, and the Minor Metals.
1 Gr., 3 G. S., 3 Se., 3 Ju., 1 So., 1 Sp. Total 12.

28 [1]*hf*. Dr. MANSFIELD. — Geological Surveying.
3 G. S., 1 Se., 2 So., 1 Sp. Total 7.

30[2]. THE INSTRUCTORS IN THE DEPARTMENT. — Mining and Metallurgical Projects and Design. 3 G. S. Total 3.

COURSE OF RESEARCH

20. Professor SAUVEUR. — Metallurgy and the Physics of Metals.
1 Gr., 1 G. S., 1 Se., 1 So. Total 4.

## Anthropology

*Primarily for Undergraduates:* —

1. Dr. TOZZER, assisted by Mr. R. G. FULLER. Occasional lectures by Professor PUTNAM — General Anthropology.
4 Se., 25 Ju., 28 So., 3 Fr., 1 Sp. Total 61.

*For Undergraduates and Graduates:* —

5. Asst. Professor DIXON, assisted by Mr. SPINDEN. Occasional lectures by Professor PUTNAM. — American Archaeology and Ethnography.
2 Se., 6 Ju., 4 So., 1 Sp. Total 13.

4 [1]*hf*. Dr. CHARLES PEABODY. — Prehistoric European Archaeology and European Ethnography. 2 Se. Total 2.

7 [2]*hf*. Asst. Professor DIXON. — Ethnography of Oceania.
1 Se., 1 Ju., 1 So. Total 3.

*Primarily for Graduates:* —

‡9 [1]*hf*. Dr. TOZZER. — Archaeology and Hieroglyphic Systems of Central America.
1 Gr., 1 Se. Total 2.

COURSES OF RESEARCH

‡20*a*. Professor PUTNAM. — American Archaeology and Ethnology.
3 Gr., 1 Se. Total 4.

‡20*c*. Asst. Professor DIXON. — Studies in American Languages. 1 Gr. Total 1.

‡20*d*. Asst. Professor DIXON. — General Ethnology. 2 Gr. Total 2.

‡20*e*. Dr. TOZZER. — Central American and Mexican Hieroglyphic and Picture Writing. 2 Gr. Total 2.

## Physiology

1. Drs. DARLING, PROVANDIE, BACON, HAPGOOD and JOUETT. — Elementary Anatomy and Physiology. Personal Hygiene. Emergencies.
16 Se., 28 Ju., 65 So., 7 Fr., 5 Sp., 1 Bu. Total 122.

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In accordance with the vote of the President and Fellows whereby the Faculty may under certain conditions authorize a Doctor of Philosophy or a Doctor of Science to give instruction gratuitously or for such fees as he may himself collect, Robert M. Wernaer, Ph.D., was authorized to give in the second half-year a course on the Romantic School in Germany.

### *The Larger Courses of Study*

I print once more the number of enrolments in every course containing more than a hundred students, together with the corresponding figures in the two preceding years: —

| Course | Number of Students in 1905–06 | in 1906–07 | in 1907–08 |
|---|---|---|---|
| Greek 11 | | 143 | |
| Latin *B* | 125 | 152 | 134 |
| Latin 10 | 115 | | |
| English *A* | 504 | 525 | 498 |
| English 31 | 175 | (Eng. D) 227 | 217 |
| English 28 | 104 | 144 | 122 |
| English 41 | | | 130 |
| English 45 | | | 165 |
| English 2 | 112 | | 101 |
| English 42*b* | 102 | | |
| English 15 | 129 | | |
| English 8*a* | 160 | 104 | |
| English 8*b* | 127 | | |
| English 33 | 131 | | |
| Public Speaking 1 | | | 123 |
| German *A* | 243 | 330 | 253 |
| German 25 | | 121 | |
| French *A* | 119 | 134 | 116 |
| French 2*c* | 165 | 105 | |
| French 2*a* | 104 | 110 | 134 |
| Comparative Literature 1 | | 122 | 153 |
| Comparative Literature 12 | | 166 | 161 |
| History 1*a* | 331 | 303 | (Hist. 1) 282 |
| History 12*a* | 102 | 126 | 108 |
| History 12*b* | | 115 | 114 |
| History 16*a* | 141 | 132 | 170 |
| History 16*b* | 125 | 113 | 169 |
| History 13 | 108 | 104 | 141 |
| Government 1 | 384 | 383 | 380 |
| Government 16 | 116 | | |
| Economics 1 | 470 | 392 | 482 |
| Economics 7*b* | 137 | | |
| Economics 5 | 138 | 205 | 126 |
| Economics 6*b* | | 112 | 143 |
| Economics 8*b* | 105 | | 108 |
| Economics 9*b* | | 120 | 115 |

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| Course | Number of Students in 1905–06 | in 1906–07 | in 1907–08 |
|---|---|---|---|
| Economics 21 | 150 | 152 | |
| Philosophy 1*a* | 226 | | |
| Philosophy *A* | | 124 | 206 |
| Philosophy *B* | | 170 | 221 |
| Philosophy *C* | | | 138 |
| Philosophy *D* | | 133 | |
| Philosophy *E* | | 216 | 346 |
| Social Ethics 1 | 165 | 175 | 108 |
| Fine Arts 3 | | 107 | |
| Music 3 | | | 139 |
| Astronomy 1 | 166 | | |
| Physics *C* | 180 | 190 | 186 |
| Chemistry 1 | 311 | 298 | 302 |
| Chemistry 3 | | 109 | |
| Engineering 1*a* | 111 | | |
| Engineering 1*b* | 153 | | |
| Engineering 1*d* | 127 | | |
| Engineering 3*a* | 148 | 130 | 144 |
| Engineering 4*a* | 108 | | 116 |
| Engineering 5*b* | 104 | | 104 |
| Engineering 11*a* | 108 | | 115 |
| Engineering 4*d* | | | 101 |
| Botany 1 | 147 | 147 | 110 |
| Zoölogy 1 | 119 | 147 | |
| Mining 16 | | | 119 |
| Anatomy, Physiol., & Hygiene | 153 | 160 (Phys'l.1) | 122 |

Economics 1, with ninety students more than in 1906–07, remains the largest elective course. Government 1 follows it closely. The only other elective courses with more than three hundred students are Government 1, Philosophy *E*, and Chemistry 1.

### *Summer Courses of Instruction.*

The following courses (eighty-four as compared with sixty-one in 1907) were given, under the direction of the Faculty, in the summer of 1908. The abbreviations, with the addition of S.S. for "member of the Summer School," are the same as those in the preceding list. A hand ☞ points to each course that may be counted toward a degree: —

#### Anthropology

☞ Dr. A. M. Tozzer. — General Anthropology. 5 times a week, for 6 weeks. 1 Se., 4 Fr., 1 Sp., 3 S. S. Total 9.

#### Astronomy

☞ Asst. Professor W. C. Brenke (University of Nebraska). — Descriptive and Observational Astronomy. 5 times a week, for 6 weeks. 1 Fr., 2 S. S. Total 3.

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### Botany

S1. Dr. M. A. Chrysler (University of Maine). — Introductory Course: The Structure, Physiology, and Œcology of Flowering Plants. 5 times a week, for 6 weeks. 1 Ju., 1 So., 8 S. S. Total 10.

S2. Mr. R. B. Thomson. — Advanced Course: Morphology and Œcology of Flowering Plants. 5 times a week, for 6 weeks.
1 Gr., 1 Se., 6 S. S. Total 8.

### Chemistry

Asst. Professor Baxter and Mr. A. C. Boylston. — Elementary Chemistry. 5 times a week, for 6 weeks. 1 Gr., 1 G. S., 1 Ju., 20 S. S. Total 23.

Asst. Professor Torrey. — Qualitative Analysis. 5 times a week for 6 weeks. 2 G. S., 1 Se., 1 Ju., 9 S. S. Total 13.

Asst. Professor Baxter. — Quantitative Analysis. 5 times a week, for 6 weeks. 2 G. S., 1 Se., 1 Ju., 9 S. S. Total 13.

Asst. Professor Torrey. — Organic Chemistry. 5 times a week, for 6 weeks.
1 Se., 2 Ju., 1 So., 8 S. S. Total 12.

Dr. H. L. Frevert. — Physical Chemistry. 5 times a week for 6 weeks.
1 Ju., 1 S. S. Total 2.

Asst. Professors Baxter and Torrey. — Chemical Research.
2 S. S. Total 2.

### Education

Professor E. O. Sisson (University of Washington). — History of Modern Education. 5 times a week, for 6 weeks.
2 Ju., 4 So., 1 Fr., 6 S. S. Total 13.

Professor E. O. Sisson (University of Washington). — General Principles of Education. 5 times a week, for 6 weeks.
1 Sp., 3 Ju., 1 So., 16 S. S. Total 21.

Dr. Frank E. Spaulding (Newton). — School Administration. 5 times a week. for 6 weeks. 2 So., 20 S. S. Total 22.

Dr. James Sullivan (Brooklyn, N.Y.). — Methods of Teaching History. 5 times a week, for 6 weeks. 18 S. S. Total 18.

Mr. George W. Evans (Boston). — Methods of Teaching Mathematics. 5 times a week, for 6 weeks. 9 S. S. Total 9.

### Engineering

The following courses were given in the summer as part of the regular instruction of the Division of Engineering. Some of them were given at Squam Lake, New Hampshire: —

4*a*. Asst. Professor Hughes. — Plane and Topographical Surveying. Field work. Daily, 6 weeks.
5 G. S., 4 Se., 20 Ju., 37 So., 25 Fr., 13 Sp., 12 Sc., 11 S. S. Total 127.

4*d*. Asst. Professor Hughes. — Railroad Engineering. Daily, 5 weeks.
3 G. S., 4 Se., 17 Ju., 36 So., 17 Fr., 12 Sp., 12 Sc., 8 S. S. Total 109.

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☞ 5*b*. Mr. H. P. Forté. — Elementary Statics. Daily, 3 weeks.
4 So., 1 Sc. Total 5.*

☞ 5*d*. Mr. H. P. Forté. — Resistance of Materials. Daily, 3 weeks.
1 Ju., 2 So., 1 Sc. Total 4.†

☞ 10*a*. Mr. F. R. Pleasonton, assisted by Mr. E. R. Markham. — Chipping, filing, and fitting. 90 hours.
2 Gr., 2 G. S., 1 Se., 5 Ju., 7 So., 7 Fr., 6 Sp., 4 Sc., 4 S. S. Total 38.

☞ 10*b*. Mr. F. R. Pleasonton, assisted by Mr. E. R. Markham. — Blacksmithing. 90 hours.
2 Gr., 2 G. S., 1 Se., 4 Ju., 6 So., 7 Fr., 6 Sp., 6 Sc., 3 S. S. Total 37.

☞ 10*c*. Mr. F. R. Pleasonton, assisted by Mr. E. R. Markham. — Pattern Making, etc. 90 hours.
2 Gr., 1 G. S., 1 Se., 5 Ju., 5 So., 7 Fr., 5 Sp., 6 Sc., 5 S.S. Total 37.

☞ 10*e*. Mr. F. R. Pleasonton, assisted by Mr. E. R. Markham. — Machine-Shop Practice. 90 hours.
2 Gr., 1 G. S., 1 Se., 5 Ju., 7 So., 7 Fr., 5 Sp., 5 Sc., 3 S. S. Total 36.

### English

*A*. Mr. H. R. Shipherd. — English Composition (elementary course). 5 times a week, for 6 weeks. 1 Sp., 31 S. S. Total 32.

*B*. Professor A. E. Hancock (Haverford College). — English Composition (advanced course). 5 times a week, for 6 weeks.
1 Ju., 1 Fr., 24 S. S. Total 26.

*C*. Mr. H. M. Rideout (Boston). — English Composition (second advanced course). 5 times a week, for 6 weeks. 21 S. S. Total 21.

Mr. C. R. Nutter. — College Admission Requirements in English. 5 times a week, for 6 weeks. 45 S. S. Total 45.

☞ Mr. J. W. Rankin. — Anglo-Saxon. Anglo-Saxon Reader and Grammar. 5 times a week, for 6 weeks. 2 So., 2 S. S. Total 4.

Professor A. E. Hancock (Haverford College). — Outlines of English Literature. 5 times a week, for 6 weeks. 12 S. S. Total 12.

Mr. H. M. Rideout (Boston). — English Literature of the Eighteenth Century. 5 times a week, for 6 weeks. 1 Fr., 7 S. S. Total 8.

Mr. Copeland. — English Literature of the Nineteenth Century, from the publication of the Lyrical Ballads to the death of Tennyson. 5 times a week, for 6 weeks. 23 S. S. Total 23.

Dr. P. A. Hutchison. — English Romantic Poets. 5 times a week, for 6 weeks.
2 S. S. Total 2.

### Fine Arts

☞ Professor O. S. Tonks (Princeton University). — History of Ancient Art. 5 times a week, for 6 weeks. 2 Se., 3 Ju., 5 So., 11 Fr. Total 21.

* There were 104 students enrolled in the regular class in term-time.
† There were 10 students enrolled in the regular class in term-time.

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☞ Dr. DENMAN W. ROSS. — Design as Applied in the Arts. 5 times a week, for 6 weeks. 1 Fr., 28 S. S. Total 29.

☞ Dr. DENMAN W. ROSS. — Drawing and Painting in Representation. 5 times a week, for 6 weeks. 12 S. S. Total 12.

☞ Asst. Professor MOWLL. — Architectural Design. 5 times a week, for 6 weeks or 12 weeks. 5 G. S., 1 Ju., 1 So. Total 7.

☞ Professor H. L. WARREN. — History of European Architecture to about 1000 A.D. 5 times a week, for 6 weeks.
1 Ju., 1 So., 4 S. S. Total 6.

☞ Professor H. L. WARREN. — History of European Architecture from about 1000 A.D. to the close of the Renaissance. 5 times a week, for 6 weeks. 1 Fr., 3 S. S. Total 4.

### French

☞ Professor C. H. C. WRIGHT. — Intermediate French Course for Teachers. 5 times a week, for 6 weeks. 2 Gr., 2 Ju., 1 Sp., 11 S. S. Total 16.

Mr. A. BRUN. — French Conversation. 5 times a week, for 6 weeks.
16 S. S. Total 16.

☞ Professor ALCÉE FORTIER (Tulane University). — French Literature of the Nineteenth Century. 5 times a week, for 6 weeks.
1 So., 6 S. S. Total 7.

### Geology and Geography

☞ Dr. G. R. MANSFIELD. — Field Course in Structural and Historical Geology. 6 times a week, for 5 weeks. 3 Ju., 1 So., 1 Fr., 1 S. S. Total 6.

☞ Professor DAVIS. — *Section A.* Physiographic Field Investigation. 6 times a week, for 5 weeks.*

☞ Asst. Professor D. W. JOHNSON. — *Section B.* Physiographic Field Investigation. 6 times a week, for 5 weeks.
1 Gr., 1 Ju., 1 So., 1 Sp., 1 S. S. Total 5.

☞ Professor WOLFF and Asst. Professor WOODWORTH. — Geological Field Investigation. 1 So. Total 1.

### German

☞ Dr. A. W. BOESCHE. — German Grammar and Composition; Methods of Teaching German. 5 times a week, for 6 weeks.
1 Ju., 1 Sp., 10 S. S. Total 12.

Dr. A. W. BOESCHE. — German Conversation. 5 times a week, for 6 weeks.
1 Ju., 1 Sp., 10 S. S. Total 12.

☞ Dr. H. J. WEBER. — German Dramatists of the Nineteenth Century. 5 times a week, for 6 weeks. 1 So., 1 Fr., 9 S. S. Total 11.

* Enrolment not reported.

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### Greek

Asst. Professor GULICK. — Greek for Beginners. 5 times a week, for 6 weeks. 7 S. S. Total 7.

☞ Asst. Professor GULICK. — The Life of the Ancient Greeks. 5 times a week, for six weeks. 1 Gr., 1 Se., 8 Ju., 12 So., 8 Fr., 5 S. S. Total 35.

### History and Government

☞ Asst. Professor W. S. FERGUSON. — Greek History. 5 times a week, for 6 weeks. 9 S. S. Total 9.

☞ Asst. Professor W. S. FERGUSON. — Roman History. 5 times a week, for 6 weeks. 7 S. S. Total 7.

☞ Professor WILLIAM MACDONALD (Brown University). — Mediaeval European History. 5 times a week, for 6 weeks. 1 So., 11 S. S. Total 12.

☞ Professor WILLIAM MACDONALD (Brown University). — American History. 5 times a week, for 6 weeks. 1 So., 2 Fr., 1 Law, 15 S. S. Total 19.

☞ Asst. Professor MUNRO. — Civil Government. 5 times a week, for 6 weeks. 7 S. S. Total 7.

☞ Asst. Professor MUNRO. — Municipal Government. 5 times a week, for 6 weeks. 1 Gr., 4 Ju., 5 So., 3 Fr., 1 Sp., 9 S. S. Total 23.

### Latin

Dr. A. S. PEASE. — General Course for Teachers. 5 times a week, for 6 weeks. 17 S. S. Total 17.

☞ Asst. Professor E. K. RAND. — The Roman Poets and Their Influence on Literature. 5 times a week, for 6 weeks. 1 Ju., 7 S. S. Total 8.

### Mathematics

☞ Mr. A. B. FRIZELL. — Advanced Algebra. 5 times a week, for 6 weeks. 7 S. S. Total 7.

☞ Mr. GEORGE W. EVANS (Boston). — Solid Geometry. 5 times a week, for 6 weeks. 1 Se., 2 So., 1 Fr., 6 S. S. Total 10.

☞ Asst. Professor W. C. BRENKE (University of Nebraska). — Plane Trigonometry. 5 times a week, for 6 weeks. 1 Ju., 1 So., 2 Fr., 1 Sp., 7 S. S. Total 12.

☞ Asst. Professor LOVE. — Plane Analytic Geometry. 5 times a week, for 6 weeks. 1 Ju., 7 S. S. Total 8.

Professor OSGOOD. — Differential and Integral Calculus. 5 times a week, for 6 weeks. 1 G. S., 1 So., 5 S. S. Total 7.

### Music

☞ Asst. Professor J. P. MARSHALL (Boston University). — Harmony and Simple Counterpoint. 4 times a week, for 6 weeks. 2 So., 11 S. S. Total 13.

☞ Asst. Professor J. P. MARSHALL (Boston University). — Musical Analysis. 4 times a week, for 6 weeks. 1 Gr., 2 So., 4 Fr. Total 7.

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### Philosophy

☞ Asst. Professor R. B. PERRY.—General Introduction to Philosophy. 5 times a week, for 6 weeks. 1 Ju., 3 So., 7 S. S. Total 11.

☞ Asst. Professor R. B. PERRY. — History of Modern Philosophy. 5 times a week, for 6 weeks. 2 So., 3 S. S. Total 5.

☞ Professor ROYCE. — Introduction to Ethics. 5 times a week, for 6 weeks. 1 So., 11 S. S. Total 12.

☞ Professor ROYCE. — Metaphysics. 5 times a week, for 6 weeks. 4 Ju., 1 Sp., 3 S. S. Total 8.

### Physical Education

Dr. SARGENT and assistants. — Elementary and Advanced Courses in Theory. 5 weeks. 1 Se., 1 Fr., 83 S. S. Total 85.

Dr. SARGENT and assistants. — Elementary and Advanced Courses in Practice. 5 weeks. 1 Se., 1 Fr., 149 S. S. Total 151.

### Physics

Professor W. E. MCELFRESH (Williams College) and Mr. H. C. HAYES. — College Admission Requirements in Physics. 5 times a week, for 6 weeks. 1 Fr., 29 S. S. Total 30.

☞ *C.* Dr. P. W. BRIDGMAN. — Advanced Course in Physics. 5 times a week, for 6 weeks. 1 Ju., 9 S. S. Total 10.

### Psychology

☞ Dr. YERKES. — Descriptive Psychology. 5 times a week, for 6 weeks. 2 So., 1 Fr., 1 Sp., 11 S. S. Total 15.

☞ Dr. YERKES. — Applied Psychology. 5 times a week, for 6 weeks. 1 Ju., 2 So., 9 S. S. Total 12.

### Public Speaking, Platform Reading, Voice Training.

Mr. B. G. WILLARD. — Development of the Voice. 5 times a week, for 6 weeks. 1 Ju., 10 S. S. Total 11.

Asst. Professor WINTER and Asst. Professor LEWIS (Williams College). — Platform Reading. 5 times a week, for 6 weeks. 1 Law, 10 S. S. Total 11.

Asst. Professor WINTER and Asst. Professor LEWIS (Williams College). — Platform Speaking. 5 times a week, for 6 weeks. 1 G. S., 2 Ju., 12 S. S. Total 15.

Asst. Professor WINTER. — Oral Reading of English Classics. 3 times a week, for 6 weeks. 1 Ju., 1 Law, 32 S. S. Total 34.

### Spanish

Mr. G. L. LINCOLN. — Elementary Course. 5 times a week, for 6 weeks. 1 So., 4 S. S. Total 5.

☞ Mr. G. L. LINCOLN. — Advanced Course. 5 times a week, for 6 weeks. 4 S. S. Total 4.

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The following table shows the enrolment in the Afternoon and Saturday Courses for teachers: —

| Subject | Instructor | Men | Women | Total |
|---|---|---|---|---|
| BOTANY: | | | | |
| The Structure, Habits, and Uses of Flowering Plants. | Professor Goodale. | 1 | 7 | 8 |
| ECONOMICS: | | | | |
| Introductory Course in Economic Theory and History. | Professor Gay and Asst Professor Bullock. | 8 | 4 | 12 |
| EDUCATION: | | | | |
| General Principles of Education and Programmes of Study. | Asst. Professor Norton. | 1 | 5 | 6 |
| Secondary Education at Home and Abroad. | Professor Hanus. | 6 | 8 | 14 |
| ENGLISH: | | | | |
| The Romantic Movement in English Poetry in the beginning of the nineteenth century. | Professor Neilson. | — | 9 | 9 |
| English Composition. | Mr. Castle. | — | 12 | 12 |
| FRENCH: | | | | |
| Grammar, Composition, Translation, and Explanation of Texts. | Associate Professor de Sumichrast. | 4 | 5 | 9 |
| GOVERNMENT: | | | | |
| Principles of American Government, — National, State, and Local. | Professor Hart. | 4 | 10 | 14 |
| LATIN: | | | | |
| Latin Composition. | Dr. Pease. | — | 4 | 4 |
| MUSIC: | | | | |
| Grammar of Music. | Mr. Heilman. | 1 | 3 | 4 |
| Structure and Contents of Instrumental Music. | Professor Spalding. | 2 | 5 | 7 |
| PUBLIC SPEAKING: | | | | |
| Oral Reading and Platform Speaking. | Asst. Professor Winter and Mr. Willard. | 5 | 6 | 11 |
| | | 32 | 78 | 110 |
| Deduct for names inserted more than once | | | | 6 |
| | | | | 104 |

These courses also were offered but not taken: —

FINE ARTS:
Modern Landscape Painting. — Mr. Arthur Pope.

GEOGRAPHY:
The Physiography of the Lands. — Dr. Mansfield.

GREEK:
Lucian. — Asst. Professor Gulick.

PHILOSOPHY:
Introduction to Ethics. — Professor Royce.

PHYSICAL EDUCATION. — Dr. Sargent.

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## PUBLIC HONOR TO HIGH SCHOLARS

In October the President made known to the Faculty a request of the President and Fellows: —

"*Voted*, to request the Faculty of Arts and Sciences to post conspicuously on Commencement Day in Memorial Hall, and at their discretion in other places, the names of those students in Harvard College whose scholarship during the year then closing the Faculty deem worthy of such distinction."

The President made known, also, certain suggestions of the Board of Overseers for honoring high scholars, and appointed a committee to consider these suggestions and others. This committee consulted a committee of the Overseers, a committee of the Alumni, and several other interested persons, at joint meetings. The recommendation of the joint committee thus formed was sent to the Overseers.

How far it is possible in this country to give high scholars public recognition, or even to interest the public in them, may well be questioned. Our annual meeting in their honor attracts parents, schoolmasters, and stray members of the governing boards. Last year it rose to public importance because of the shock administered to local and national pride by Mr. Wister's address; but up to that time it had been thinly attended and lukewarm. The reception at which our best undergraduate scholars meet in Boston the most distinguished men available has been successful from the first. A modest decoration worn at academic ceremonies may do something. Yet the scholar's reward must for ever be as different from the athlete's as the essayist's is from the demagogue's. People who make the stock comparison between athlete and scholar overlook the conspicuous truth that what an athlete does may be seen and in great part comprehended by thirty thousand persons at once. The really powerful and oppressive contrast is the contrast between the position of Honor men at English universities and that of high undergraduate scholars at our own. Not that the Honor men have the public notoriety of athletes; what they have is the recognition and approval of university leaders, past and present, of the intellectual aristocracy of their country. The failure of our high scholars to win this reward may mean inferiority in them or in our methods of testing and choosing them; it may mean inferiority in our intellectual leaders; it may mean difference in area, population, and social conditions between America and England.

That the Faculty is somewhat uneasy regarding its tests for scholarly distinction may be inferred from the appointment of a committee "to consider how the tests for rank and scholarly distinction in Harvard College can be made a more generally recognized measure of intellectual power."

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## DEGREES OF PH.D., S.D., AND S.M. IN THE MEDICAL SCIENCES

In October, the Faculty learned that the Faculty of Medicine accepted the proposal of the Faculty of Arts and Sciences "that a joint Committee on Honors and Higher Degrees be appointed from the two Faculties to take charge of the instruction and examinations for the degrees of Ph.D., S.D., and S.M. in the medical sciences,—the joint Committee to recommend candidates for the degree to the Faculty of Arts and Sciences." The Faculty of Medicine suggested that a majority of the joint Committee should be chosen from the Faculty of Medicine; and in this suggestion the Faculty of Arts and Sciences concurred.

## REQUESTS FOR CERTAIN FORMS OF UNIVERSITY EXTENSION

In October, the Faculty received from the Superintendent of Schools in Brockton a request that a course of thirty two-hour lectures should be given at Brockton in the winter; that the course should be identical in its requirements with a course offered at the College; and that credit should be given to every person who should do the required work and pass the final examination:

The communication was referred to the Committee on Afternoon and Saturday Courses for Teachers. The immediate establishment of the course seemed impracticable; and a similar request, for the present year, is now before the Faculty.

Such a request cannot be thought of as a single item of Faculty business. Action on it implies a policy toward university extension and toward crediting, with a view to some future academic degree, work done under college officers outside of college. To refuse one superintendent may be juster, as well as easier, than to refuse another after accommodating one; discriminations among the motives of superintendents would be ticklish: yet the Faculty, as at present constituted, could not provide instruction at many places outside of Cambridge and do the college work for which it is primarily employed. Tempting as an opportunity to extend Harvard influence and usefulness may be, the Faculty before accepting the opportunity must consider what the acceptance means.

This request from Brockton is part of a great movement among American school teachers toward college work and, if possible, college degrees. This movement seems to have begun not so much with the teachers themselves in their thirst for higher learning as with the

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school committees and superintendents, who urge on them college courses as a prerequisite of promotion or even as an insurance of continued employment. Doubtless many teachers really long for such courses; others theoretically want them, but are almost or quite too tired to enjoy them or profit by them, and take them, with serious risk to health, because they are afraid not to.

Whether this view of the question be sound or unsound, the movement is of great importance to school and college alike. Last year it reached Harvard University through four channels: —

(1) The request from Brockton for a "course" in that city.

(2) A petition of Boston school teachers for arrangements whereby they may complete in seven years (the seventh a year in residence at the University) the requirements for the degree of A.B.

(3) Certain courses under Harvard teachers at the Lowell Institute.

(4) An increase in the number of courses offered at the Summer School that may be counted toward the degree of A.B. or toward the degree of A.M.

It will be observed that all these matters concern deeply the relation of the University to the public schools, and the resort of pupils (as well as teachers) from those schools to Harvard College; also that they concern the expenditure of the time, the strength, and the productive power of the Harvard Faculty. Most of all, they concern Radcliffe College, both because the school teachers are chiefly women and the degree involved is therefore usually a Radcliffe degree, and because any new draught on the teaching power of the Harvard Faculty renders provision for Radcliffe College more difficult. The Faculty, after considering these new enterprises one by one, voted at the end of the year, on the motion of Professor A. C. Coolidge, —

"That a committee of seven be appointed to investigate and report whether, and under what circumstances, it is desirable that the members of this Faculty should do supplementary teaching, and what should be the attitude of the Faculty toward the demand that extension courses should be counted toward a degree."

Previously the Faculty had voted at different meetings, —

"That the Faculty is willing to attempt to provide courses from the regular list at a favorable time and place, if such courses are petitioned for by a sufficient number of students qualified to take them.

"That [these] courses may be counted toward the degree of A.B. or S.B. by teachers who afterward enter Harvard College." (This vote applies to men, but carries with it a corresponding promise, in Radcliffe College, to women.)

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"That Lowell Institute courses when accepted by the Departments concerned may be counted towards a degree when taken by persons who afterward secure admission to College.

"That the Committee on Summer Courses of Instruction be authorized to publish a general statement embodying the present practice regarding the counting of summer courses toward the degree of A.M., — that is, that certain advanced courses may be counted toward the degree of A.M. on condition that they are approved in each case by the Department concerned and by the Administrative Board of the Graduate School, but in no case will the degree be granted except after a residence at the University of at least one year."

The first of these votes prevents waste in the Afternoon and Saturday Courses for Teachers, and prevents, for example, a professor's offering a course which only one person would have courage to take.

The third makes it possible to bring into line with college work courses experimentally offered in Professor Lowell's scheme of "Lowell Institute collegiate courses given under the auspices of Harvard University." These courses are offered in the evening. They are intended primarily for the general public of limited means and opportunity, among whom may be counted not a few school teachers. Two courses only were given in 1907–08: —

General European History. Professor Haskins.
English Literature and Composition. Mr. Copeland.

The success of the experiment warranted the Faculty in approving for 1908–09: —

English Literature and Composition. Mr. Copeland.
History of Ancient Philosophy. Professor Palmer.
General Problems of Philosophy. Professor Royce.
Modern Constitutional Government. Professor Lowell.

All four votes point toward a piecemeal degree — the only degree possible to teachers in active service. For a teacher who already has the A.B., a sufficient number of courses certified as of A.M. grade and accomplished with high credit might at some institutions insure the A.M.; but thus far the Harvard Faculty has demanded a solid year of residence, and of study in related courses. For a teacher who has never been in college and who desires the A.B., the difficulties are still greater. When through extra study in both winter and summer year after year, he is within one year's work of the number of courses required, he must stop his regular teaching for a year of residence at college, — to say nothing of meeting admission requirements. The task is for the strongest only.

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## CHANGES IN THE ADMINISTRATION OF PRIZES

Early in the year the Faculty made still further improvements in the administration of prizes, —

"*Voted*, that all committees on prizes shall report not only the essays for which prizes are awarded, but also those essays which seem to be worthy of distinction; and all essays reported shall be considered in the award of scholarships and the granting of degrees with distinction."

The closer relation recently established between prizes and college courses shows excellent results. Not for many years has the competition for literary prizes been so healthy. I print the names of students who, in 1907–08, won prizes in competitions recognized by the Faculty. (See pages 100, 101.)

The Committee on Bowdoin Prizes, in accordance with the recent vote of the Faculty of Arts and Sciences, recommended the following twelve essays, submitted for Bowdoin Prizes, for consideration in the awards of distinctions and of scholarships: —

The Imperial Domains of the Roman Empire. — Lloyd William Brooke, Junior, Salt Lake City, Utah.

The Character of Socrates. — Benjamin Crocker Clough, Freshman, Hyde Park.

English Orthography. — Godfrey Dewey, Junior, Lake Placid Club, N.Y.

Leonardo da Vinci. — Edwin Merrick Dodd, Jr., Sophomore, Chestnut Hill.

The Revival of Learning in England. — Albert Gould Eldridge, Senior, West Lynn.

The Contribution of Richard Wagner to Modern Music. — Isaac Goldberg, Freshman, Boston.

The Law of Heredity. — Roger Sherman Hoar, Junior, Concord.

The Hebrew Prophets. — Henry Hurwitz, Senior, Gloucester.

The Benefit System of the Cigar-Makers' International Union. — Joseph Levine, Junior, Roxbury.

The Relation of the Municipality to Transportation. — Edmund Whitehead Ogden, Sophomore, Fall River.

Annual and Biennial Elections in Massachusetts. — James Max Rosenthal, Junior, Pittsfield.

Fielding and Thackeray as Writers of Burlesque. — Carl Schmidt, Senior, Toledo, O.

## ATHLETICS

In December, the Association of Colleges in New England, consisting of the president and one other delegate from each college, voted at its annual meeting "to send to the various colleges represented in the Association the following expression of opinion: —

"That an exaggerated amount of attention is now given to intercollegiate athletic contests in most of the New England colleges, and to diminish the exaggeration the most effective measure would be a large reduction in the number of intercollegiate contests."

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The Faculty, receiving the communication in January, voted: —

"To send to the President and Fellows of Harvard College, the Committee on the Regulation of Athletic Sports, and each college represented in the Association of Colleges in New England, the following expression of opinion: —

"That in the opinion of this Faculty the number of intercollegiate contests should be largely reduced."

In March, after prolonged discussion in which drastic measures were proposed, the Faculty voted as follows: —

"This Faculty believing that the present frequency of intercollegiate games is injurious to the scholarly interests of which it has charge, urgently recommends to the Committee on the Regulation of Athletic Sports that it shall seek by means of agreement with competing colleges, or otherwise, to reduce considerably in the coming year the programme of intercollegiate contests."

Also, —

"That the Faculty expresses its willingness to coöperate with the other New England colleges, and that the request be referred to the Committee on the Regulation of Athletic Sports."

When the Committee named in the foregoing votes was considering seriously the abolition of intercollegiate winter sports, the Faculty received from the undergraduates a petition deprecating the action proposed, and asking leave to undertake, through the students themselves, some reduction of present evils. The petition, after friendly words from the Faculty about coöperation with students, was referred to the Committee on the Regulation of Athletic Sports. The students organized a Council, which undertakes to do away with unreasonable absences from the class-room on the days of intercollegiate contests, and in general to reduce the ground for complaint that the activities managed by the undergraduates render students irresponsible in their academic duties. As the Council belongs to the students, its doings find no place in a report on the work of the Faculty; nor did it get under way till the present college year. I may point out, however, that the undergraduates at the head of it are of the highest quality as college citizens.

## THE GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

In May the President and Fellows voted: —

"That until further order of this Board, the Graduate School of Business Administration be coördinated with the Graduate School of Arts and Sciences and the Graduate School of Applied Science as a Department under the Faculty of Arts and Sciences."

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| Prize, — Amount | For what | Name and Academic Position | Home Address |
|---|---|---|---|
| Jeremy Belknap, $50 | Translation into French of a passage in Goldsmith's "Citizen of the World." | Chauncey Depew Snow, Freshman. | Montello. |
| Bennett, $40 | The Paper and Pulp Industry of America. | Truman Kella Gibson, A.B., Senior. | Macon, Ga. |
| Francis Boott, $100 | Composition entitled "Evening Song," for Chorus of Mixed Voices and Organ or Piano. | Philip Greeley Clapp, Junior. | Roxbury. |
| Bowdoin, $250 | Aristotle and the Modern Drama. | Lee Simonson, Junior. | New York, N. Y. |
| " $200 | The Temperament of John Donne. | Clarence Dewey Britten, Sophomore. | Cambridge. |
| " $100 | Novalis's Romantic Metamorphosis of the Philosophy of Fichte. | Jacob Loewenberg, Sophomore. | Jamaica Plain. |
| " $100 | The Rationale of Description. | Roy Wilson Follett, Junior. | North Attleboro. |
| " $200 | The Telephone in Great Britain. | Arthur Norman Holcombe, 2 Graduate. | Winchester. |
| " $200 | A Theory of the American Revolution. | George Newman Fuller, 3 Graduate. | Hastings, Mich. |
| " $200 | The Pastoral Elegy and Milton's Lycidas. | James Holly Hanford, 2 Graduate. | Rochester, N. Y. |
| " $100 | An original essay in Greek, Ἡ τοῦ Ἀλεξάνδρου Ἀνάβασις ἡ πρὸς τὰ Ἱεροσόλυμα | Robert Chisolm Horn, 2 Graduate. | Allentown, Pa. |
| " $50 | Translation into Attic Greek of a passage n Walter Pater's "Plato and Platonism." | Edwin William Friend, Sophomore. | Indianapolis, Ind. |
| " $50 | Translation into Latin of a passage in Walter Pater's "Marius the Epicurean." | Frederick Livesey, Senior. | West Lynn. |
| Boylston, $60 | Elocution. | Thomas Charles O'Brien, Junior. | Brighton. |
| " $60 | " | Otto Ludwig Martin Henry Lyding, Jun. | Peekskill, N. Y. |
| " $45 | " | Henry Hurwitz, Senior. | Gloucester. |
| " $45 | " | David Rosenblum, Senior. | Brooklyn, N. Y. |
| " $45 | " | Marston Allen, Senior. | Glendale, O. |
| Coolidge, $100 | Trials for Harvard-Yale Debate. | Joseph Stancliffe Davis, Senior. | New York, N. Y. |
| " $100 | Trials for Harvard-Princeton Debate. | Henry Hurwitz, Senior. | Gloucester. |
| Lloyd McKim Garrison, $100 and a silver medal. | Poem "New England." | Harford Willing Hare Powel, Jr., Junior | Newport, R. I. |

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| Prize, — Amount | For what | Name and Academic Position | Home Address |
|---|---|---|---|
| Harvard Menorah Society, $100. | The Jews of Newport, 1760–1785. | James Max Rosenthal, Junior. | Pittsfield. |
| Pasteur Medal | A Debate on a subject drawn from contemporary French politics. | David Haar, Special. | New York, N. Y. |
| Wendell Phillips Memorial Scholarship, $50 | Oratorical power. | Grover Charles Good, Junior. | Lima, Ind. |
| Ricardo Prize Scholarship, $350. | . . . . . | Joseph Stancliffe Davis, Senior. | New York, N. Y. |
| Sales, $45. | Translation into Spanish of a passage in Prescott's "Philip the Second." | Charles Omar McMahon, Junior. | Philadelphia, Pa. |
| Sargent, $100 | Metrical translation of the seventh Ode of the fourth Book of Horace. | Edward Thomas Eyre Hunt, Soph. | Mechanicsburg, O. |
| Sohier, $250. | The Pessimism of Giacomo Leopardi. | Benjamin Mather Woodbridge, 1 Gr. | Williamstown. |
| Sumner, $100. | The Contributions of the South American Republics to International Arbitration. | Corning Benton, 1 Graduate. | Newton Centre. |
| Toppan, $150. | Burgage Tenure in Mediaeval England. | Morley de Wolfe Hemmeon, 3 Graduate. | Wolfville, N.S. |
| Philip Washburn, $75. | Queen Elizabeth and the Huguenots. | Charles Milton Rogerson, Junior. | Milton. |

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In June it voted: —

"That the Dean of the Faculty and the Dean of the Graduate School of Business Administration be authorized to represent the Committee of Instruction with power in making any necessary announcements concerning the new School during the summer, provided the courses are duly authorized by the Corporation."

These votes showed that the new School was to open at once. From the first it has "caught the imagination of the College," as a professor not concerned in it has remarked. Above all, it seems likely to rouse the intellectual ambition of able undergraduates who have thus far put their best energy into other than college work, and who look forward to it eagerly as to their natural Graduate School. Its first published list of courses was of almost stirring interest; its Dean is full of enthusiasm and practical energy. No one can fail to hope much for its future.

## TESTIMONIAL TO MR. JONES

If the Faculty ever acted with perfect unanimity, it did so in the recognition of the work of Mr. Jones, the old ringer of the College bell. It is said that only once in his fifty years' service the bell had been rung late; that then it was but four minutes late; and that this unexampled tardiness was caused by the need of Mr. Jones's help for putting out a fire in the College Yard. He was a man to set clocks by, uniquely combining an aspect of good-natured ease with the promptest efficiency, — never in a hurry and never found wanting. The Faculty gave him a "Franklin" arm-chair with a suitable inscription, and a parchment illuminated by Mr. F. Schuyler Mathews with these words: —

"The Faculty desires to record at this meeting the completion of fifty years of honorable and faithful services to Harvard University by Mr. Austin Kingsley Jones. Mr. Jones entered the service of the University in 1858 as College Janitor, and for forty years had charge of the Chapel and other public buildings, and rang the bell on Harvard Hall. In 1898 he retired from his active duties except that of ringing the College bell. This duty he has performed for fifty years, giving an example of fidelity and punctuality to all members of the University.

"The Faculty congratulates Mr. Jones on his long service to the University, and bespeaks for him the happiness and satisfaction which the sense of having worked well and won many friends can bring."

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## THE PRESIDENT

I cannot close this report without remembering that it is the last which I shall make to the only President of Harvard University whom my generation has known, or without expressing my gratitude for the high privilege of hard work under such a leader.

L. B. R. BRIGGS, *Dean.*

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# THE COLLEGE

To the President of the University: —

Sir, — I have the honor to present to you a report on Harvard College for the academic year 1907–08.

The total number of students in the College at the time when the lists were compiled for the Catalogue of 1907–08 was two thousand two hundred and seventy-seven, divided as follows: —

| | |
|---|---|
| Seniors | 293 |
| Juniors | 467 |
| Sophomores | 679 |
| Freshmen | 607 |
| Total number of Undergraduates | 2046 |
| Special Students | 231 |
| Total | 2277 |

These figures, compared with those of the corresponding time in 1906–07, show a gain of thirty: —

| | Gain. | Loss. |
|---|---|---|
| Seniors | | 35 |
| Juniors | 49 | |
| Sophomores | 46 | |
| Freshmen | 2 | |
| Special Students | | 32 |
| | 97 | 67 |
| Net gain | 30 | |

A study of this table, similar tables for the five preceding years, and tables giving the constitution of the Freshman classes for a like or even longer period, shows that the number of students resorting to Harvard College is not increasing. Indeed, it is doubtful whether, in view of the improvement in methods of instruction and facilities therefor in state universities, and the ease with which admission to most colleges and universities is now secured by certificate, the rate of increase of a decade ago may again be expected. The gain is likely to be small; Harvard must look for recruits to those traditionally associated with her and to the more ambitious youths of the country, desirous to prove themselves by rigorous tests.

During the year the following students died: —

Wilbur Sanford Blakeslee, '09, . . . . . July 12, 1908.
James William Carr Bowden, '09, . . . October 6, 1907.
Tung Chung Chen, Special, . . . . . August 9, 1908.
Joseph Horatio Hutchinson, '08, . . . . . June 12, 1908.
Henry Daniels Matteson, '11, . . . . . June 25, 1908.
Jerome Randall, '11, . . . . . August 4, 1908.
William Otis Smith, '11, . . . . . June 19, 1908.



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Three hundred and fifty-three students — fourteen in March and three hundred and thirty-nine in June — received the degree of Bachelor of Arts in course. (Compared with the figures of the preceding year, these show a decrease of ninety-five.) Of these one hundred and ninety-seven were registered as Seniors. The registration of the others is shown in the following table: —

| | |
|---|---|
| On leave of absence all the year | 22 |
| On leave of absence first half-year | 2 |
| On leave of absence second half-year | 19 |
| Graduate Students in Arts and Sciences | 8 |
| Graduate Students in Applied Science | 9 |
| Registered in the Law School | 29 |
| Registered in the Medical School | 9 |
| Registered in the Scientific School | 4 |
| Registered in the Junior Class | 13 |
| Registered in the Sophomore Class | 15 |
| | 130 |
| To be designated "as of 1909" in the *Quinquennial* | 26 |
| | 156 |

Thirty students received the degree of Bachelor of Science. Their registration is given in the next table: —

| | |
|---|---|
| Senior Class | 22 |
| Junior Class | 3 |
| Sophomore Class | 2 |
| On leave of absence whole year | 1 |
| On leave of absence for second half-year | 1 |
| | 29 |
| To be designated "as of 1909" in the *Quinquennial* | 1 |
| | 30 |

Of the thirty, twenty-three had begun their course in the Lawrence Scientific School; one had entered the College, then been transferred to the Scientific School, and then rejoined Harvard College; six had never been registered in the Scientific School. Fifteen may be said to have specialized in Science, electing in Harvard College those courses which formerly were the constituents of the prescribed programmes in the Scientific School; in the cases of twelve there appears to be a slight preponderance of courses in Science, a fairly equal division between general and scientific courses; in the cases of three the election of Science was so small that the degree of Bachelor of Science seems highly inappropriate.

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The next tables show the losses and gains in the three younger classes between November, 1907, and November, 1908: —

| | November, 1907. | | Loss. | Gain. | November, 1908. | |
|---|---|---|---|---|---|---|
| Class of 1909 . . | (Juniors) | 470 | 178 | 61 | (Seniors) | 353 |
| Class of 1910 . . | (Sophomores) | 677 | 267 | 79 | (Juniors) | 489 |
| Class of 1911 . . | (Freshmen) | 607 | 176 | 190 | (Sophomores) | 621 |
| | | | 621 | 330 | | |

Net loss in the three classes between Nov., 1907, and Nov., 1908, 291 (74 more than in 1907).

| | Class of 1909. | Class of 1910. | Class of 1911. | Total for three classes. |
|---|---|---|---|---|
| LOSSES | | | | |
| Left College before the end of the year . . | 10 | 27 | 31 | 68 |
| Left College at the end of the year . . . . | 139 | 45 | 13 | 197 |
| Were "dropped" and left College . . . . | 7 | 35 | 20 | 62 |
| Entered a lower class . . . . . | 14 | 119 | 96 | 229 |
| Entered a higher class . . . . . | 8 | 41 | 16 | 65 |
| Total loss . . . . . | 178 | 267 | 176 | 621 |
| GAINS | | | | |
| From higher classes . . . . . | 8 | 13 | 120 | 141 |
| From lower classes . . . . . | 38 | 16 | . . | 54 |
| Newly admitted . . . . . | 15 | 50 | 70 | 135 |
| Total gain . . . . . | 61 | 79 | 190 | 330 |
| Net loss . . . . . | 117 | 188 | . . | 291 |
| Net gain . . . . . | . . | . . | 14 | . . |

[The discrepancy between the numbers of students in the classes as given in this table and the numbers as given in the Catalogues of the corresponding years is caused by students entering or withdrawing after the Catalogue goes to press.]

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The next table shows the losses and gains in the number of Special Students since December, 1907: —

| | |
|---|---|
| In attendance, December, 1907 | 231 |
| Left College before the end of the year | 40 |
| Left College at the end of the year | 36 |
| Entered a College class | 73 |
| Total loss | 149 |
| Reëntered College as Special Students in 1908 | 82 |
| Newly admitted | 101 |
| Total | 183 |
| Net loss | 48 |

The Freshman Class in 1908–09 numbers six hundred: —

| | |
|---|---|
| Admitted by examination in 1908 | 471 |
| Admitted by examination before 1908 | 12 |
| Admitted from another college | 4 |
| *From a higher class | 102 |
| " the Special Students | 6 |
| " the Lawrence Scientific School | 5 |
| Total | 600 |

A comparison of these figures with those of the preceding year shows in actual numbers a loss of but two; in reality, however, the loss is much greater, as will be seen by comparing the number of students admitted by examination at the beginning of each year: —

| | | | |
|---|---|---|---|
| Admitted by examination in 1907 | 506 | by examination before 1907 | 33 |
| Admitted by examination in 1908 | 471 | by examination before 1908 | 12 |
| Loss | 35 | Loss | 21 |

The numbers of the Freshman Class of the present academic year, 1908–09, are swelled by sixty-six students held in that class by the operation of the rule, first enforced in the case of the Class of 1911, that no student with admission conditions may register in a higher class until these are removed. Heretofore these sixty-six students would have been allowed to register as Sophomores.

A table which for several years past has appeared in this report has shown a Senior Class almost steadily decreasing in numbers. In 1906–07 the tendency was temporarily checked by the transference to Harvard College of students formerly registered in the Lawrence Scientific School; but in 1907–08 the Senior Class was smaller than in the preceding year. The present year the class has again swelled

* Dropped from 1911 (by low record), 27; (by admission conditions), 66. Readmitted Freshmen, formerly 1910, 4; formerly 1911, 5.

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in numbers. From these temporary checks, however, it would be fallacious to argue that there is any real movement away from the tendency toward a three years' degree as the normal type. Even the present totals are artificially swelled: a number of men of ability who have completed, or who could easily complete, the requirements for their degrees at the end of three years, register each year as Seniors in the College, rather than as members of a graduate school, in order to enjoy the larger scholarships which are there available for them, choosing greater freedom from financial anxiety, rather than the higher degree obtainable for a year of graduate work; likewise a few athletes, desiring to be eligible for another year of intercollegiate contests, make the same choice. An examination of the records of the three hundred and fifty-three Seniors in 1908–09 shows that fourteen have already completed the requirements for their degrees, and that one hundred and twenty-nine could so arrange their work as to complete the requirements at the middle of the year, — that is, that of the three hundred and fifty-three Seniors one hundred and forty-three lack at most not more than three courses.

REQUIREMENTS FOR DEGREE

| | | | |
|---|---|---|---|
| Work complete . . . . . | 14 | Four half-courses to do . . | 22 |
| One half-course to do . . . | 9 | Five half-courses to do . . | 29 |
| Two half-courses to do . . | 11 | Six half-courses to do . . . | 40 |
| Three half-courses to do . . | 18 | | 143 |

(In the graduate schools were registered on leave of absence four students who needed a half-course. These should be added to the number of Seniors and to the number of students able to complete the requirements at the middle of the year.)

| | |
|---|---|
| Registered in the Graduate School of Arts and Sciences one half-course to do . . . . . | 2 |
| Registered in the Divinity School one half-course to do . . | 1 |
| Registered in the Medical School one half-course to do . . | 1 |

In view of this manifest tendency of so large a number to complete their work in three or three and a half years, and especially in view of the establishment of the two new graduate schools of applied science and of business, thus fully and symmetrically rounding the graduate instruction of the University, the Faculty may well consider whether the time is not ripe for a thorough overhauling of the terms on which a Bachelor's degree is granted, — whether the hour has not come for the establishment of the three years' degree for all undergraduates. Whether a three years' course is preferable to a four is debatable; but most will agree that a clean-cut under-

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graduate three years' course is better than the present confusion. Sentimentally the loss of the Senior year (the Sophomore would in all probability be the one to disappear) is to be regretted; but it is by no means to be assumed that the establishment of the three years' degree means the elimination of a fourth year of training. For the genial loafer, the man who wants a degree, but gives little thought to an education, valuable as may be the contact between his back and the bricks of the College (and that it is valuable his career after leaving College shows unquestionably), three years of idling, of just meeting the low standard that the Faculty mistakenly denominates "satisfactory," are quite enough, — some may think them too many. The three years' course would send most men of this class into real work a year earlier than at present, and at an age when a year means much. Any of these who elected to stay for a fourth year would benefit almost incalculably, as do the really serious students, by the more stimulating atmosphere of a graduate school and the clearer vision of its students; the mere act of choosing forces a parting with old standards and satisfactions. To the average undergraduate the future is dim and misty — real life and work are immeasurably far away; the graduate student sees clearly an opportunity all too short fitly to prepare himself for his calling.

That the present standard of work "to pass" is low, the investigations of the Committee on Improving Instruction clearly showed; undergraduates of to-day almost without exception frankly admit it. To obtain the necessary number of "grades above *D*" (the "requisite number of *C*'s" is the common phrase) requires almost no steady, and only briefly concentrated labor; nowhere except in a college would the work which produces "the requisite number of *C*'s," the so-called "satisfactory" record, be tolerated from youths of equal age and endowment — nowhere else where young men are supposed to be seriously at work is so low a standard in quality endured. Nevertheless, although any student of fair ability can easily meet the present requirement in three years (even the boy of mediocre talent can do the work without a strain that will for a moment endanger his health or shut him off from friendships and play), the present requirement of seventeen courses is ill suited to three years. Of these seventeen courses, two, prescribed for the majority, English composition and a modern foreign language, belong properly in the secondary school. Even, however, should it be necessary to prescribe and maintain these courses in the College it may well be asked whether a smaller number of courses and a much higher standard of work will not give a better education. Seventeen courses in three college years

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mean (unless a student works in the Summer School, choosing from a limited number of courses — too often merely for the sake of scoring something towards a degree) at best a rate of six courses for at least one year and five and a half for each of his remaining two years. The result is dispersion in place of concentration of effort. Experience has shown clearly that, although almost every student can pass in six courses with the grades necessary for promotion, practically none who take six have time really to master them and to do the work that is equally, perhaps more, important — the reading and the investigation inspired by lectures and prescribed reading, work which has no direct bearing on the examinations or grades, but whose value in producing a truly educated man cannot be overestimated. In view, therefore, of these conditions and the great resort to the three years' course, the Faculty may well consider whether a three years' degree based upon five courses a year with a much higher requirement as regards quality of work would not educationally produce far better results than the present system.

The members of the Administrative Board for 1907–08 were Professors Willson, Parker, Ward, Lyman, Mr. Hart, the Assistant Dean, and the Dean.

During the year two students were suspended, three were dismissed, three withdrew on advice, and thirty-four had their probation closed. Of the students on probation at the end of the year twenty-five failed to win relief and were told that under the rules their probation was closed and they would be readmitted only on presenting evidence of good work done during the summer. Of the fifty-nine who were thus sent away during or at the end of the year, forty-eight presented satisfactory evidence of work and were readmitted at the beginning of the present year.

The number of scholars winning a position in the First Group for the academic year 1908–09 is forty-eight; of these sixteen hold honorary and thirty-two stipendiary scholarships. (See Table, pp. 112, 113.) In 1907–08 thirty-eight students won a position in this group; eleven held honorary and twenty-seven stipendiary scholarships.

One hundred and seventy-seven students in 1908–09 hold scholarships of the Second Group, — eighty-nine stipendiary, eighty-eight honorary, — as compared with one hundred and thirty-three honorary and eighty-seven stipendiary, in 1907–08. The rank necessary to obtain a scholarship in this group (determined by the number and the rank of the competitors for scholarships with stipend) was distinctly higher in 1907–08 than in 1906–07.

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Toward the close of the year the "athletic crisis" brought from the students, addressed primarily to the Committee on Athletic Sports, a petition praying, in substance, that intercollegiate contests be not abolished, but that the undergraduates be given an opportunity at least to attempt to remedy the existing evils. The plan covered much more than athletic matters. It was proposed that a student council should be organized into whose hands the undergraduates were to commit their government in practically all matters of undergraduate life, whose decisions should be law in all public questions of their republic. It was empowered to represent the undergraduates in consultation with any officer or governing board of the University. The ample powers proposed in the constitution, the wide scope of the Council's possible activities, aroused at first hostile criticism from some members of the Faculty, who, not understanding its purpose, thought that the students proposed to arrogate to themselves disciplinary functions vested in the Faculty or its committees — to establish a variety of student government, several not very successful experiments with which have been seen in American colleges. Thus to interpret the Council's constitution was entirely to mistake it. Those who framed it sought merely to vest in a body representing all the undergraduates the rights possessed by any student, or club, or class. The Council was empowered to judge and to speak for all, but no officer or governing board was bound to listen. The Committee on Athletics and the Dean could, and did, welcome the offer of coöperation, and on their part could offer to assist the Council so far as lay in their power. This was all. To one who studies carefully the history of undergraduate life for the last fifteen or twenty years the establishment of the Council, although somewhat prematurely forced by the athletic question, was foreordained. Dean Briggs planted the seeds and they germinated long ago. The graduate of twenty-five years ago who since his departure from Cambridge has heard little and seen still less of College life, is surprised and incredulous when told of the strong bonds that unite the members of each undergraduate class, of the keen sense of responsibility for the honor of the class felt by every class officer, of the thousand and one duties, great and small, which "the Office" is now by its own long habit and the generous and ungrudging services of many undergraduates accustomed "as a matter of course" to ask class officers to perform. To him this service of the whole class, for this in truth is what it is, was unknown, undreamed of. The Council is the fruition of the spirit bred in the classes, — the union of the undergraduates. Whether it was forced into existence

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| CLASS. | NAME. | SCHOLARSHIP. | HOME. | SCHOOL. |
|---|---|---|---|---|
| '09 | Roger Adams | John Harvard | Cambridge | Cambridge Latin School. |
| '09 | Edward Ralph Belcher | Class of 1856 | Plymouth | Amherst College. |
| '11 | Karl Irving Bennett | Matthews | Gloucester | Gloucester High School. |
| '10 | John William Stansbury Brady | John Harvard | Baltimore, Md. | Haverford School, Haverford, Pa. |
| '09 | Arthur Gilchrist Brodeur | Price Greenleaf | Westfield | Westfield High School and Amherst College |
| '09 | Robert Wayne Byerly | John Harvard | Cambridge | Cambridge Latin School. |
| '10 | Chester March Cate | Price Greenleaf | Wakefield | Wakefield High School. |
| '11 | Benjamin Crocker Clough | Price Greenleaf | Hyde Park | Hyde Park High School. |
| '11 | Frank Erskine Crawford | Price Greenleaf | Cambridge | Malden High School. |
| '09 | George Harold Edgell | John Harvard | Newport, N. H. | Cutler School, New York, N. Y. |
| '11 | Frederick May Eliot | John Harvard | Boston | Roxbury Latin School. |
| '11 | Francis Dewey Everett | Jacob Wendell | Worcester | St. Mark's School. |
| '09 | Carlos Gallardo | Matthews | San Juan, P. R. | University School, Cincinnati, O. |
| '11 | Isaac Goldberg | Price Greenleaf | Boston | Boston English High School. |
| '10 | Robert Winslow Gordon | Bowditch | Cambridge | Phillips Exeter Academy. |
| '10 | William Caspar Graustein | John Harvard | Cambridge | Cambridge Latin School. |
| '11 | William Chase Greene | John Harvard | Baltimore, Md. | Jefferson School. |
| '11 | Albert Philip Happel | Bowditch | Winthrop | Winthrop High School. |
| '09 | Harold Newcomb Hillebrand | Lady Mowlson | Washington, D.C. | Cornell University. |
| '10 | Marcus Horblit | Price Greenleaf | Roxbury | Boston Latin School. |
| '11 | Francis Alley Hubbard | Bowditch | Cambridge | Cambridge Latin School. |
| '10 | Edward Thomas Eyre Hunt | Saltonstall | Cambridge | Mechanicsburg (Ohio) High School. |
| '08* | Robert Mann Johnson | John Harvard | Arlington, R. I. | Dartmouth College. |
| '10 | Robert Harrington Kent | Price Greenleaf | Cazenovia, N. Y. | Cazenovia Seminary. |

* Received the degree of Bachelor of Arts at the end of his Junior year (1907-08), as a member of the Class of 1908.

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| CLASS. | NAME. | SCHOLARSHIP. | HOME. | SCHOOL. |
|---|---|---|---|---|
| '09 | Sidney Fiske Kimball | Richard Augustine Gambrill | Dorchester | Mechanic Arts High School. |
| '09 | Richard Lawson Knowles | John Harvard | New Bedford | St. Mark's School. |
| '09 | George Joseph Levy | Bowditch | Streator, Ill. | Syracuse University, Syracuse, N. Y. |
| '09 | Charles Castner Lilly | Matthews | Waldoboro, Me. | Brewster Free Academy, Wolfboro, N.H. |
| '10 | Charles Harold Livingston | Bigelow | Philadelphia, Pa. | University of Pennsylvania. |
| '09 | Oscar Gottfried Mayer | John Harvard | Chicago, Ill. | R. A. Waller Public High School. |
| '11 | Ralph Vincent Moody | Price Greenleaf | Youngstown, O. | Rayen High School. |
| '11 | Joseph Murdoch | Ruluff Sterling Choate | Cambridge | Roxbury Latin School. |
| '11 | Philip Curtis Nash | Bowditch | Allston | Mechanic Arts High School. |
| '09 | Robert Lyman Niles | John Harvard | New York, N.Y. | Kelvin School, New York, N. Y. |
| '09 | Laurence Bradford Packard | Charles Wyman | Brockton | Brockton High School. |
| '10 | Dexter Perkins | Bowditch | Boston | Boston Latin School. |
| '10 | Roger Glade Rand | Price Greenleaf | Youngstown, O. | Rayen High School. |
| '09 | William Gardner Reed, Jr. | John Harvard | Cambridge | Volkmann's School. |
| '09 | William Bergman Richards | Bowditch | Washington,D.C. | Washington Central High School. |
| '09 | Fletcher Nichols Robinson | Morey | Pinehurst, N. C. | Reading High School. |
| '09 | William Greene Roelker, Jr. | John Harvard | Newport, R. I. | Groton School. |
| '09 | Charles Milton Rogerson | John Harvard | Milton | Milton Academy. |
| '10 | Henry Thomas Schnittkind | Bowditch | Boston | Boston Latin School. |
| '09 | Lee Simonson | John Harvard | New York, N.Y. | Ethical Culture High School. |
| '09 | Cornelius Crosby Webster | Class of 1856 | Binghamton,N.Y. | Binghamton Central High School. |
| '10 | David Locke Webster | John Harvard | Cohasset | Noble and Greenough's School. |
| '10 | Herbert Wing, Jr. | William Samuel Eliot | South Dartmouth | New Bedford High School. |
| '11 | Francis Solomon Wyner | Price Greenleaf | Dorchester | Boston Latin School. |

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prematurely and therefore may prematurely die, whether it will hold the great body of supporters which it now has and win the suffrage of doubters and opponents, time alone can tell; its creation was but a few months ago — it is on trial; but whether it succeeds or fails, one fact is sure, — no body of graduates or undergraduates has ever undertaken a difficult service for Harvard College with a keener desire for her honor or a warmer love.

B. S. HURLBUT, *Dean*

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# ATHLETIC SPORTS

To the President of the University: —

Sir, — As Chairman of the Committee on the Regulation of Athletic Sports, I have the honor to report the work of the academic year 1907–08.

In that year the Faculty members of the Committee, appointed, as is well known, on the recommendation of a joint committee of the Corporation and the Overseers, were the Dean of the Faculty, the Dean of Harvard College, and the Dean of the Lawrence Scientific School. For several years most of the Faculty members had been experts in athletics; and since the other members, graduate and undergraduate, were usually persons who had won athletic distinction, it was felt that the academic side of athletic questions might not have received due weight. Moreover, since the detailed supervision of athletics seemed to the President and Fellows unsuitable expenditure of a professor's time, and since the Deans had little time to expend, the Committee was directed to secure some man to whom all minor athletic matters should be delegated, who should be the natural if not the sole officer for students to consult in athletic questions, who should be responsible to the Committee alone, and whose work should be judged by its outcome and not watched step by step. The Committee, it was thought, might meet rarely, discuss larger questions only, and act chiefly as an advisory body.

To the three Deans, thus suddenly enabled and compelled to look at the duties of the Committee from the inside, no quest short of that for the perfect horse seemed less promising than the quest for the one man on whom the burdens of the Committee might be laid. Applicants were not wanting, some with certain qualifications, none with all. The Committee believed that the man should be much more than a mere employee, that he should be a high-minded person with such tact and judgment and integrity as should guide him and others through delicate negotiations, an expert in athletic affairs, and a natural leader of youth. The position, in short, seemed to the Committee one of the most influential and important in the University, because the work in it would bear directly on the physical, mental, and moral well-being of the students. An inexperienced youth, however promising, would be a skittish experiment; a middle-aged man who had failed in other work would scarcely be an experi-



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ment at all. A man already doing in his chosen profession honorable and successful service — the only kind of man worth considering — would be almost a fanatic to abandon that profession for anything so precarious as the care of Harvard athletics, with the undergraduates below him, the Committee, the Faculty, the Overseers, and the Corporation above, and the graduates on all sides; and if almost a fanatic he could not, hampered or unhampered, be wise enough for the position.

After long and fruitless search, the Committee, holding that half the time of a good man was worth more than all the time of an inferior one, and that it could not urge anyone to abandon his profession for the direction of athletics without more security than it was justified in assuring, appointed W. F. Garcelon, LL.B., as Graduate Treasurer of the Harvard Athletic Association, in the belief that he would soon make himself so valuable to every athletic sport as to become by common consent the principal Harvard authority in athletics. Mr. Garcelon was for some years the unpaid and generous adviser of the track team, and has an unusual general knowledge of athletics. What specially commends him to the Committee is his interest in out-of-door sport for the strengthening of the weak quite as much as for the competitive perfecting of the strong — his interest in athletics as part of a young man's education — and his conviction that, whether a college wins or loses in intercollegiate contests, careful attention should be paid to men who will never "make" university teams. Incidentally he believes that even university teams will in the long run be quite as successful when every man in the college is awake to the value of instruction in athletics, and to the knowledge that he can get such instruction, as when nearly every bit of teaching power is expended in an effort to perfect the strength and the skill of the few who are already supremely skilful and strong. Mr. Garcelon, moreover, already had the confidence of graduates and undergraduates interested in athletics, and had sufficient imagination to see in the position offered to him such opportunity for usefulness as justified some risk of personal loss in his chosen profession.

Earlier in the academic year the Committee had appointed Arthur H. Weed, '03, as its paid Secretary, to relieve the Chairman of correspondence, to prepare business for the meetings, and in divers other ways to be helpful.

In spite of the relief afforded by these reinforcements, the Committee had plenty to do. Before the coming of Messrs. Weed and Garcelon, it was obliged to deal with all sorts of questions to which

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the Faculty members were unaccustomed, and in which a vote on a small matter had often a large meaning; it was obliged, further, to prosecute the search which ended in the appointment of Mr. Garcelon. Merely disposing of the pressing business from week to week required more time than could easily be afforded; for the ramifications of athletics are more numerous and more complicated than any outsider conceives. The Committee held in the academic year twenty-four meetings, most of them long ones. The Faculty members, far from believing that in studying athletics they were wasting time, recognized the close relation between the students' sports and the physical, mental, and moral health of the College. The human side of the work must attract anybody interested in human beings; and the relation of college officer to unofficial graduate and to undergraduate is almost unique and wholly agreeable. The protest of the Deans against service in the Committee was born of the feeling that they were ignorant of athletics and short of time; it was not born of dislike or indifference to the work itself. In the Committee, there is marked difference of opinion but no radical difference of purpose, of good will, or of sincerity. The undergraduate members, whom the cynical or the sceptical are disposed to regard as persons that wish to circumvent the Faculty in the interests of athletics, win and hold the respect and the warm regard of the Faculty members; nor in general are there any officers of the University who try harder to do right than those undergraduates whom, with an instinct that is a constant surprise, their fellows raise to responsible positions in the citizenship of college life.

Within the Committee, then, people trusted one another and worked in what may be called spirited harmony. Dean Sabine, in athletics the least experienced member, became, by reason of general good judgment and of the confidence which he always inspires, one of the most valuable. It was only when his new duties to the Graduate School of Applied Science made necessary his relief that he withdrew from the Committee, — quite as unwillingly as he had entered it.

The chief drawback to service in the Committee, and to success in the service, is the constantly strained and unstable condition of Harvard athletic administration. On one side are the undergraduates, a reasonable and intelligent body, but like nearly all Americans, young or old, inclined to turn sport into work — even overwork — and sometimes inclined to turn work into sport. They love athletics (as the normal youth nearly always does); they love their College (as the normal youth always must). They can ill bear that the

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chance of victory for their College should be diminished or destroyed by shifting policy and by real or threatened restriction, — especially by such restriction as is unknown to their chief competitors. With them, heart and soul, is a large body of graduates who believe, as I do, that long continued defeat in football seriously injures the reputation of the College for efficiency, has a bad moral effect and, supported by official publications which seem to endanger still further what the students love, keeps out of Harvard College many vigorous, promising boys, who, however immature in their choice of an alma mater, will be honorable sons of whatever alma mater they may choose. With the students, too, are the general public, clamoring for admission to intercollegiate football contests, contending, with some plausibility, that forty thousand spectators are no more demoralizing and scarcely less exclusive than thirty thousand (with increased speculation in tickets), and inclined to shout for the college that oftenest wins. On the other side are the Corporation, urging a material reduction in the number of intercollegiate contests and opposed to extra seats in the Stadium; the President, proposing that intercollegiate contests in each sport be reduced to two, and at least suggesting that intercollegiate football be abolished altogether; the Faculty, at one time half-inclined to forbid any students under it from participating in intercollegiate athletics until the Committee (which is not a committee of the Faculty) reduces the number of contests by at least one-half; all parents who wish their sons kept out of football by somebody other than themselves; and a considerable number of thoughtful persons who have watched with apprehension athletic sport overgrowing scholarship in what were designed to be institutions of learning. Such, if I may say so, is the scrimmage from which the Committee on the Regulation of Athletic Sports, in constant danger of losing the ball, is expected to emerge for some kind of touchdown.

It is a situation to test patience, and to stimulate effort in those who love what is difficult. The Committee is convinced that thorough knowledge would in great measure reconcile opposing views; but for thorough knowledge even the Committee itself has scarcely time. Out of the entanglement a few things free themselves and become clearly distinguishable: first and foremost, no single college can by drastic regulations change the spirit of the American people; secondly, such regulations may do much harm in the college; thirdly, the enthusiasm which many persons object to, but which has its fine side, will continue as long as Harvard, under any approach to fair conditions, plays football with Yale, — but, for some reason,

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nobody proposes the abandonment of this contest; fourthly, great progress may be secured through the intelligent good will of the students themselves, especially in such a college as Harvard, which in general relies on the reason and right feeling of the alumni and the undergraduates rather than on suppressive laws. The present Committee on Athletics, knowing only too well that it may not be the Committee of the immediate future, believes that with time and a free hand it could put Harvard athletics into as healthy a condition as the American view of sport makes possible, and that in bringing about this condition, it might do something, however small, toward bettering the American view; it believes that, through Mr. Garcelon, it can create a general faith in physical exercise as a part of education for the weak quite as much as for the strong; that such a faith produces a spirit which renders active and skilful a large number of men and indirectly strengthens the chance of victory in intercollegiate contests; that in football, despite the disadvantage of competing with such a trained football genius as Mr. Camp — not to mention Yale prestige and its effect on boys at school — the system of Mr. Haughton is so intelligent and so efficient as to make surprises possible.*

Until the Faculty urged the reduction of schedules,† the Committee, busy with what it believed to demand first attention, tried rather to stop short the gradual lengthening of schedules than to effect a material curtailment; but as soon as the question was forced on the Committee it began to consider the schedule question with extreme care. Since its suggestion of abandoning all intercollegiate sports between Thanksgiving and the spring recess (made in the hope of saving the major sports from mutilation) found little favor even with those persons who had said the worst things of the winter games, it decided to take up each schedule when submitted, and to discover if possible how much reduction each needs and will bear. It sees no equity in a blanket reduction of a certain per cent., nor can it honestly vote for so large a reduction as some members of the Faculty demand. Furthermore, it believes that a reduction of ten per cent. willingly made by the students themselves is much healthier than a reduction of fifty per cent. made arbitrarily by the University authorities. It believes that Committee, Students, and Faculty should educate and be educated together.

The question which is the best sport depends in part on personal liking; the question which brings out for exercise the greatest num-

* This was written before the victory of November 21.

† See page 99 of the Report of the Dean of the Faculty of Arts and Sciences.

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ber of men depends in part on the amount of available territory, and in part on the number without which the sport cannot be attempted. Rowing has been called the best sport; but to many persons it seems — for the few men who take part in the race with Yale — the most dangerous. Moreover, this race brings together, outside of all Faculty control, great crowds of students, with nothing to do but wait for the race and console or congratulate themselves afterward. The race itself is a short and not always visible spectacle for which those who attend it pay high.* Again, the training and the equipment of a crew are enormously expensive and, since the race brings in no money, must be paid for by solicited subscription or by the proceeds of football and baseball. As to the relative interest in the different sports, it is true that many students are out on the river — which, except when frozen, is always at their service, even if each of them rows alone; it is also true that within a week after the laying out of a new and imperfect diamond twenty-five nines, mutually exclusive in membership, had booked themselves for a competitive series. I am far from wishing to abandon intercollegiate rowing; I am merely trying to show that a case may be made out against it — as against any sports not looked at in their length and breadth.

The sports differ so widely that reasoning from one to another may be quite unsafe. In the matter of schedules, for instance, every one knows that an exceedingly small number of intercollegiate boat races, as at present conducted, are all a crew can stand. Sometimes one of them is more than one of the crews can stand. In baseball, on the contrary, a match with another college involves ordinarily little more strain than an afternoon's practice, and sometimes less strain. It is, also, more interesting to the players,—and to the spectators, whose presence at the end of a late spring or early summer afternoon, when academic exercises are over, is not an unmitigated evil.

On the other hand, the baseball schedule for 1907–08 was probably too long for the team itself and tended to take the life out of the players. It should be remembered that occasionally games must be cancelled because of bad weather, that several games take place in the spring recess, when a nine is supposed to play as often as it likes, and that nearly all the important games are played in the period of final examinations when lectures and recitations have ceased for the year; yet with every allowance of this sort, the schedule was long. So was the schedule in basketball. This game

* "I can imagine no other ordinary occupation of human life where you go so far and see so little . . ."— President Hadley.

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is under suspicion * in this and in other colleges and may need, if it is continued, radical revision of the rules. The hockey schedule subjects a fine game to the disadvantages of metropolitan rinks and miscellaneous spectators, because college rinks, being out-of-doors, cannot be depended on for constant ice. If a covered rink were available in Cambridge, the evil would be materially decreased. The Committee is trying to treat each sport on its merits.

As someone has said, Harvard athletics, except in the winning of intercollegiate games, are in by no means bad condition. It is not generally known what great numbers of students take part for pleasure in "intramural" sports (as it is the fashion to call them), and what greater numbers will take part when the whole of Soldier's Field is made available. Even in winning games the College is better than its reputation. Last year it won again the Yale baseball series, and rowed such a race as left its rivals hopelessly behind. In football, though not yet a match for the resources of Mr. Camp, acknowledged as the supreme master of the game in America, it is at least formidable. In estimating Harvard success and failure, we must not forget that, since the first year in our professional schools cannot be counted as the last year in College, many of our athletes are eligible to University teams for two years only.

The immediate development of part of Soldier's Field, and the gradual development of the remainder, seems to the Committee a matter of great importance in the fostering of general outdoor exercise for all kinds of students. This development has been, and still is, retarded by the necessity of wiping out the debt on the Stadium; but if gate receipts are not cut down too rapidly and too severely, systematic reclaiming of the unused territory may soon begin.

At the risk of repetition, I wish to make clear that the Committee is dealing with a large and intricate subject, full of conflicting claims, and beset by all manner of prejudices. These claims it is working hard to adjust; and these prejudices — whether its own or other people's — it is working hard to remove. It uses no strategy, has no secrets, and believes that athletic sports, like every other part of the student's life, should be administered not for themselves only, but for the highest welfare of the University.

L. B. R. BRIGGS, *Chairman.*

* At an important conference of persons representing athletics in nearly all New England Colleges (Boston, May, 1908) nothing was more noteworthy than the prevailing disbelief in basketball as now played at men's colleges.

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# THE GRADUATE SCHOOL OF ARTS AND SCIENCES

To the President of the University: —

Sir, — I have the honor to present the following statement in regard to the Graduate School of Arts and Sciences for the academic year 1907–08.

The accompanying tables furnish in compact form much information concerning the membership of the School, recommendations for degrees, and the assignment of scholarships and fellowships. For convenience of reference and comparison, they are arranged, for the most part, to cover the period of thirteen years, 1895–1908.

The number of students registered in the School was four hundred and twenty-four: resident, four hundred and six; non-resident, eighteen, of whom seventeen were travelling fellows. Students enrolled for a nominal period of time, or transferred to other departments of the University, are not included in the enumeration. Of the resident students, three hundred and sixty-two were in attendance throughout the whole year. Of this number, two hundred and eighty-seven were doing full work, and seventy-five partial work. Of the remaining forty-four resident students, twenty-seven entered the School after November 1 (including three transfers from Harvard College at the end of the first half-year), and sixteen (besides one of the mid-year recruits from the College) withdrew before the end of the year. The School lost one member by death. Bliss Paisley Boultenhouse, fourth-year student of philosophy, and principal of the Franklin School, Medford, died at his home in Medford, of pneumonia, on January 29, after a short illness.

The loss in students due to the establishment and development of the Graduate School of Applied Science may be estimated at from twenty to twenty-five, using as a basis of comparison the enrolments in the scientific departments, particularly architecture, engineering, forestry, and mining, for 1905–06 and 1907–08.

The proportion of students who do partial work decreases slowly, as may be seen in the percentages at the end of Table I. Most of the students of this class are teachers: in 1907–08, forty-six — twenty-five in the University, as teaching fellows or assistants, and twenty-one in schools or colleges in or near Cambridge.

During the last dozen years, as will be seen from Table II, the number of graduates of Harvard College in the School has diminished relatively; the number of graduates of other colleges has greatly increased, both relatively and absolutely; and the proportion of first-year students has largely increased, showing that a



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greater number of men spend only a single year in residence. These tendencies, however, though unmistakable, are expressed in the table in a very irregular progression. To afford a better opportunity for studying these tendencies, and the occasion of their apparently irregular influence, I have prepared Table VI, in which the membership of the School is classified according to derivation — from Harvard or from other colleges — and within each division according to length of residence, for the years 1895–96, 1898–99, 1902–05, and 1907–08. This table, it should be noted, does not classify solely according to degrees, or absence of degrees, as does Table II, but according to the place where undergraduate studies were pursued. Thus, under 1907–08, "Harvard, one hundred and thirty-one," represents, in Table II, "A.B.'s and S.B.'s of Harvard and of no other institution, one hundred and twelve"; and also nineteen of the three hundred and one "students not holding the Harvard degree of A.B. or S.B.": namely, two graduates of the Bussey Institution, thirteen Seniors on leave of absence from Harvard College, with A.B. work nearly or quite complete, and four other Harvard non-graduates. "Other colleges, two hundred and ninety-three," represents, in Table II, the balance of the "students not holding the Harvard degree of A.B. or S.B." (three hundred and one minus nineteen equals two hundred and eighty-two), and also the eleven "A.B.'s and S.B.'s (and holders of similar degrees) of other institutions and also of Harvard"; since for all these the prime undergraduate work was done elsewhere than at Harvard. The table, thus prepared, shows a comparatively steady increase of men from other colleges, this gain, except during the last period, being chiefly of first-year men; and a steady decline in the number of Harvard men from 1898, except for a very great increase — over sixty per cent — in a single year, 1903–04. The causes of these phenomena can in part be stated with certainty, and in part conjectured. Two circumstances have undoubtedly increased strongly the proportion of first-year men among the students from other colleges: the Austin Scholarships for Teachers, established in 1899, and assigned by preference to teachers on leave of absence for a single year; and the large number among our new men of each year of advanced Graduate students, who have already completed a full year or more of resident graduate study elsewhere. Of these latter there were, in 1907–08, sixty, out of a total of one hundred and sixty-four first-year students from other colleges than Harvard, or over thirty-six per cent. The large gain in first-year men from Harvard College in 1903–04 was in great part caused by

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two coincident changes in the regulations, one permitting the admission of College Seniors on leave to the School as candidates for A.M.,* and the other allowing a Junior with work complete to take his A.B. "as of" his regular class,† thus leaving him free, if he chooses, to spend in the Graduate School what would naturally be the fourth college year. These premature Graduate students rarely return for a second year. Of the twenty-two on the rolls in 1907–08, only one returned for the year 1908–09. Besides these evident causes, it may be that some increase in the specialization of undergraduate work, both in Harvard College and elsewhere, has diminished the proportion of those who feel it necessary to devote more than one year to graduate work in order to gain such mastery as they desire of their special subjects.

Without doubt the new University Scholarships for assignment to Seniors,‡ which bring into the School men fresh from college, will have an effect in raising the average period of residence. The five men from other colleges than Harvard who were aided by the scholarships in 1907–08 have all returned to the University for the current year.

From the undergraduate departments of Harvard University, it will be seen, came about thirty per cent of the membership of the School in 1907–08, or one hundred and thirty-one students out of four hundred and twenty-four. Of these, fifteen were in a fourth or later year of membership; fifteen in a third; twenty-four in a second; seventy-seven in a first year. The first-year men comprised two men from the Bussey Institution, and one from the College Specials; one two-year man from the class of 1909, twenty-one three-year men from 1908, thirty men from 1907, seven from 1906, four from 1905, and eleven from classes previous to 1905. The quality of the men who enter the School is illustrated by the following statement of the departments of the University which attracted *summa cum laude* graduates of the Harvard College classes from 1895 to 1908 inclusive.

| | 1895. | 1896. | 1897. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whole Number | 10 | 9 | 3 | 8 | 4 | 8 | 7 | 8 | 11 | 11 | 6 | 9 | 11§ | 3 | 108 |
| Graduate School of Arts and Sciences | 8 | 5 | 1 | 5 | .. | 2 | 2 | 5 | 10 | 7 | 2 | 6 | 5 | 3 | 61 |
| Divinity School | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Law School | 1 | 1 | 1 | 2 | 1 | 2 | 3 | .. | 1 | 2 | 2 | 1 | 1 | .. | 18 |
| Medical School | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 |

* Report, 1903–04, p. 129.
† Report, 1902–03, p. 97.
‡ Report, 1906–07, p. 139.
§ Graduate School of Applied Science, 1 in 1907.

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## TABLE I. — NUMBER OF STUDENTS: 1888–1908

| | 1888–89. | 1889–90. | 1890–91. | 1891–92. | 1892–93. | 1893–94. | 1894–95. | 1895–96. | 1896–97. | 1897–98. | 1898–99. | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Resident Students doing full work in the School for the whole academic year . . . . . | 50 | 62 | 62 | 108 | 127 | 162 | 161 | 175 | 194 | 171 | 218 | 227 | 226 | 218 | 216 | 289 | 273 | 260 | 281 | 287 |
| Resident Students not doing full work or not working for the whole year as Resident Students | 39 | 34 | 55 | 79 | 73 | 86 | 94 | 105 | 96 | 107 | 103 | 99 | 113 | 86 | 94 | 123 | 105 | 133 | 105 | 119 |
| Whole number of Resident Students . . . . . | 89 | 96 | 117 | 187 | 200 | 248 | 255 | 280 | 290 | 278 | 321 | 326 | 339 | 304 | 310 | 412 | 378 | 393 | 386 | 406 |
| Non-Resident Fellows . . . . . | 9 | 11 | 11 | 9 | 9 | 10 | 12 | 13 | 14 | 15 | 12 | 13 | 14 | 11 | 15 | 14 | 15 | 16 | 21 | 17 |
| Other Non-Resident Students . . . . . | 1 | 4 | 4 | 4 | 7 | 1 | 5 | 6 | 2 | .. | 3 | 2 | .. | .. | .. | 1 | 2 | .. | .. | 1 |
| Whole number of Non-Resident Students . . . | 10 | 15 | 15 | 13 | 16 | 11 | 17 | 19 | 16 | 15 | 15 | 15 | 14 | 11 | 15 | 15 | 17 | 16 | 21 | 18 |
| Whole number of students . . . . . | 99 | 111 | 132 | 200 | 216 | 259 | 272 | 299 | 306 | 293 | 336 | 341 | 353 | 315 | 325 | 427 | 395 | 409 | 407 | 424 |
| Percentage of Resident Students doing full work for whole academic year . . . . . | 56 | 65 | 53 | 58 | 64 | 65 | 63 | 63 | 67 | 62 | 68 | 70 | 67 | 72 | 70 | 70 | 72 | 66 | 73 | 71 |

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## TABLE II. — CLASSIFICATION OF STUDENTS: 1895–1908

| | 1895–96 | 1896–97 | 1897–98 | 1898–99 | 1899–1900 | 1900–01 | 1901–02 | 1902–03 | 1903–04 | 1904–05 | 1905–06 | 1906–07 | 1907–08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| First-year Students | 156 | 156 | 149 | 186 | 181 | 189 | 157 | 175 | 259 | 237 | 220 | 228 | 241 |
| Second-year Students | 82 | 71 | 73 | 72 | 85 | 83 | 83 | 83 | 89 | 92 | 109 | 87 | 97 |
| Third-year Students | 36 | 49 | 43 | 44 | 38 | 52 | 36 | 36 | 51 | 45 | 54 | 54 | 50 |
| Fourth-year Students | 18 | 21 | 21 | 20 | 24 | 14 | 27 | 13 | 18 | 18 | 16 | 29 | 26 |
| Students in a fifth or later year | 7 | 9 | 7 | 14 | 13 | 15 | 12 | 18 | 10 | 3 | 10 | 9 | 10 |
| | — 299 | — 306 | — 293 | — 336 | — 341 | — 353 | — 315 | — 325 | — 427 | — 395 | — 409 | — 407 | — 424 |
| A.B.'s and S.B.'s of Harvard University and of no other institution | 109 | 112 | 90 | 118 | 101 | 101 | 94 | 96 | 149 | 124 | 126 | 120 | 112 |
| A.B.'s and S.B.'s (and holders of similar degrees) of other institutions and also of Harvard University | 38 | 36 | 41 | 34 | 33 | 33 | 43 | 26 | 25 | 15 | 20 | 15 | 11 |
| Students not holding the Harvard degree of A.B. or S.B. | 152 | 158 | 162 | 184 | 207 | 219 | 178 | 203 | 253 | 256 | 263 | 272 | 301 |
| | — 299 | — 306 | — 293 | — 336 | — 341 | — 353 | — 315 | — 325 | — 427 | — 395 | — 409 | — 407 | — 424 |
| Students holding the Harvard degree of A.M., S.M., Ph.D., or S.D. | 91 | 95 | 96 | 102 | 108 | 110 | 100 | 100 | 104 | 95 | 103 | 101 | 95 |
| Students holding the Harvard degree of A.B. or S.B., but not of A.M., S.M., Ph.D., or S.D. | 88 | 89 | 80 | 97 | 84 | 88 | 90 | 72 | 125 | 94 | 92 | 81 | 84 |
| Students holding no Harvard degree in Arts, Philosophy, or Science | 120 | 122 | 117 | 137 | 149 | 155 | 125 | 153 | 198 | 206 | 214 | 225 | 245 |
| | — 299 | — 306 | — 293 | — 336 | — 341 | — 353 | — 315 | — 325 | — 427 | — 395 | — 409 | — 407 | — 424 |

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TABLE III. — CLASSIFICATION OF STUDENTS BY CHIEF SUBJECTS OF STUDY: 1895–1908

| | 1895–96 | 1896–97 | 1897–98 | 1898–99 | 1899–1900 | 1900–01 | 1901–02 | 1902–03 | 1903–04 | 1904–05 | 1905–06 | 1906–07 | 1907–08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. Semitic Languages and History | 6 | 4 | 2 | 3 | .. | 1 | 1 | 1 | 2 | 2 | 2 | .. | .. |
| II. Ancient Languages (Classics and Sanskrit) | 39 | 37 | 39 | 47 | 55 | 47 | 41 | 37 | 37 | 34 | 35 | 29 | 24 |
| III. Modern Languages (including Comparative Literature) | 74 | 69 | 71 | 80 | 83 | 75 | 70 | 74 | 111 | 96 | 112 | 106 | 119 |
| IV. History and Political Science | 55 | 58 | 43 | 54 | 54 | 53 | 52 | 52 | 78 | 86 | 82 | 89 | 85 |
| V. Philosophy | 42 | 44 | 45 | 52 | 48 | 65 | 41 | 50 | 64 | 52 | 40 | 32 | 49 |
| VI. Education | | | | | | | | | | | | 24 | 14 |
| VII. Fine Arts (including Architecture) | 2 | 2 | 1 | 4 | 4 | 4 | 6 | 11 | 15 | 19 | 13 | 5 | 6 |
| VIII. Music | .. | .. | 1 | 1 | 1 | 1 | 1 | .. | 5 | 4 | 9 | 5 | 5 |
| IX. Mathematics | 21 | 22 | 14 | 19 | 12 | 20 | 17 | 22 | 21 | 14 | 13 | 24 | 22 |
| X. Physics | 8 | 12 | 16 | 15 | 10 | 14 | 13 | 12 | 14 | 14 | 12 | 9 | 15 |
| XI. Chemistry | 12 | 17 | 17 | 19 | 17 | 19 | 21 | 24 | 25 | 27 | 39 | 37 | 40 |
| XII. Engineering | 2 | 2 | 4 | .. | 4 | 6 | 6 | 5 | 9 | 3 | 10 | 5 | 2 |
| XIII. Forestry | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 |
| XIV. Biology | 29 | 30 | 22 | 25 | 21 | 21 | 23 | 19 | 19 | 20 | 22 | 17 | 22 |
| XV. Geology | | | 9 | 9 | 10 | 14 | 13 | 12 | 20 | 14 | 10 | 9 | 6 |
| XVI. Mining and Metallurgy | | | | | | | | | | | | 1 | 3 |
| XVII. Anthropology | 1 | 2 | 4 | 1 | 3 | 3 | 2 | 2 | .. | 5 | 3 | 5 | 5 |
| Unclassed Students | 8 | 7 | 5 | 7 | 19 | 10 | 8 | 4 | 6 | 4 | 7 | 9 | 6 |
| | 299 | 306 | 293 | 336 | 341 | 353 | 315 | 325 | 427 | 395 | 409 | 407 | 424 |

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TABLE IV. — PERCENTAGE OF STUDENTS IN THEIR FIRST AND FOLLOWING YEARS: 1895–1908

| | 1895–96. | 1896–97. | 1897–98. | 1898–99. | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % |
| First-year Students | 52 | 51 | 51 | 55 | 53 | 54 | 50 | 54 | 61 | 60 | 53 | 56 | 57 |
| Second-year Students | 27 | 23 | 25 | 21 | 25 | 23 | 26 | 26 | 21 | 24 | 26 | 21 | 23 |
| Third-year Students | 12 | 16 | 15 | 13 | 11 | 15 | 12 | 11 | 12 | 11 | 13 | 14 | 12 |
| Fourth-year Students and Students of longer residence | 9 | 10 | 9 | 11 | 11 | 8 | 12 | 9 | 6 | 5 | 8 | 9 | 8 |

TABLE V. — PERCENTAGE OF STUDENTS WITHOUT HARVARD DEGREES: 1895–1908

| | 1895–96. | 1896–97. | 1897–98. | 1898–99. | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Percentage of Students holding no Harvard degree | 40 | 40 | 40 | 41 | 44 | 44 | 40 | 46 | 46 | 52 | 52 | 55 | 58 |
| Percentage of Students holding no Harvard first degree in Arts or Sciences | 51 | 52 | 55 | 55 | 61 | 62 | 56 | 62 | 59 | 65 | 64 | 67 | 71 |

TABLE VI. — STUDENTS FROM HARVARD AND FROM OTHER COLLEGES: 1895–96, 1898–99, 1902–05, 1907–08

| | 1895–96. | | 1898–99. | | 1902–03. | | 1903–04. | | 1904–05. | | 1907–08. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whole number | | 299 | | 336 | | 325 | | 427 | | 395 | | 424 |
| Harvard | 109 | | 126 | | 98 | | 159 | | 146 | | 131 | |
| Other Colleges | 190 | | 210 | | 227 | | 268 | | 249 | | 293 | |
| First Year | | 156 | | 186 | | 175 | | 259 | | 237 | | 241 |
| Harvard | 57 | | 66 | | 59 | | 101 | | 88 | | 77 | |
| Other Colleges | 99 | | 120 | | 116 | | 158 | | 149 | | 164 | |
| Second Year | | 82 | | 72 | | 83 | | 89 | | 92 | | 97 |
| Harvard | 28 | | 28 | | 17 | | 33 | | 35 | | 24 | |
| Other Colleges | 54 | | 44 | | 66 | | 56 | | 57 | | 73 | |
| Third Year | | 36 | | 44 | | 36 | | 51 | | 45 | | 50 |
| Harvard | 9 | | 18 | | 12 | | 16 | | 14 | | 15 | |
| Other Colleges | 27 | | 26 | | 24 | | 35 | | 31 | | 35 | |
| Fourth Year (and later) | | 25 | | 34 | | 31 | | 28 | | 21 | | 36 |
| Harvard | 15 | | 14 | | 10 | | 9 | | 9 | | 15 | |
| Other Colleges | 10 | | 20 | | 21 | | 19 | | 12 | | 21 | |

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Of one hundred and nineteen students in Modern Languages (Table III), eighty-one were enrolled primarily in English, twelve in German, fifteen in Romance, seven in Comparative Literature, while the programmes of four defy departmental classification.

TABLE VII. — NEW STUDENTS FROM OTHER COLLEGES: 1891–92, 1895–96, 1899–1900, 1903–04, 1907–08

| DIVISION. | 1891–92. | 1895–96. | 1899–1900. | 1903–04. | 1907–08. |
|---|---|---|---|---|---|
| Semitic | 2 | .. | .. | .. | .. |
| Ancient Languages | 5 (1) | 16 (3) | 21 (1) | 11 | 8 (1) |
| Modern Languages | 10 (1+1) | 21 | 29 (4+2) | 49 (4+2) | 49 (9+1) |
| History and Political Science | 9 (4) | 13 (1) | 20 (6) | 25 (3+1) | 30 (6) |
| Philosophy | 5 (1) | 10 (2) | 16 (3+1) | 15 | 20 (3) |
| Education | .. | 5 | 5 (1) | 6 (1) | 5 (1) |
| Fine Arts | .. | .. | .. | 1 | 1 (1) |
| Music | .. | .. | 1 | 1 | .. |
| Mathematics | 7 (3) | 5 (1) | 4 (3) | 8 (2) | 12 (2+1) |
| Physics | 5 (3) | 4 (1+1) | 3 (2) | 3 (1) | 5 (2) |
| Chemistry | 5 (0+1) | 3 (1+1) | 3 (0+1) | 8 (1+1) | 10 (3+1) |
| Engineering | .. | .. | 1 | 1 (0+1) | .. |
| Forestry | .. | .. | .. | .. | .. |
| Biology | 4 (4) | 5 (3) | 4 (3) | 5 (4) | 10 (3+3†) |
| Geology | 6 (3+1) | .. | 2 | 7 (1+1) | .. |
| Mining and Metallurgy | .. | .. | .. | .. | 1 |
| Anthropology | .. | 1 | 1 | .. | .. |
| Unclassified | 4 | 5 | 5 | 4 | 4 |
| Whole number | 62 (20+3) | 88 (12+2) | 115 (23+4) | 144 (17+6) | 155 (31+6†) |

† One assistant in Biology in 1907–08 held a scholarship, and is, therefore, counted twice.

Table VII shows the number of new students from other colleges (omitting those who came after a tarry in some other department of the University, as the College or the Law School) at four-year intervals from 1891–92 to 1907–08 inclusive, for the School as a whole, and for the several Divisions. The number of these students holding scholarships or assistantships is indicated in parentheses: the former figure in each case, where two are given, referring to scholarships, and the latter to assistantships. Where only one figure is given in a parenthesis, the reference is to scholarships.

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TABLE VIII. — RECOMMENDATIONS FOR THE DEGREE OF MASTER OF ARTS BY DIVISIONS AND DEPARTMENTS: 1896–1908

| DIVISION. DEPARTMENT. | 1896. | 1897. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. Semitic Languages and History | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | 4 |
| II. Ancient Languages: | 15 | 18 | 11 | 20 | 21 | 13 | 17 | 14 | 18 | 11 | 9 | 10 | 9 | 186 |
| Indic Philology | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 3 |
| The Classics (Greek, Latin) | 15 | 17 | 11 | 20 | 21 | 13 | 16 | 13 | 18 | 11 | 9 | 10 | 9 | 183 |
| III. Modern Languages: | 23 | 23 | 30 | 21 | 30 | 28 | 27 | 32 | 42 | 32 | 29 | 35 | 34 | 386 |
| English | 11 | 12 | 14 | 13 | 19 | 14 | 15 | 19 | 28 | 22 | 15 | 24 | 25 | 231 |
| Germanic Languages and Literatures | 2 | 3 | 5 | 1 | 5 | 5 | 3 | 4 | 1 | 4 | 6 | 4 | 3 | 46 |
| French, and other Romance Languages and Literatures | 1 | 1 | 3 | 3 | 3 | 6 | 8 | 7 | 11 | 3 | 6 | 4 | 3 | 59 |
| Comparative Literature | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| In more than one Department | 9 | 7 | 8 | 4 | 3 | 3 | 1 | 2 | 2 | 3 | 2 | 3 | 2 | 49 |
| IV. History and Political Science: | 16 | 20 | 20 | 22 | 20 | 33 | 25 | 26 | 40 | 33 | 28 | 23 | 26 | 332 |
| History and Government | 9 | 13 | 15 | 18 | 16 | 24 | 10 | 18 | 23 | 22 | 18 | 18 | 15 | 213 |
| Political Economy | 2 | 7 | 5 | 4 | 4 | 9 | 15 | 14 | 17 | 11 | 10 | 5 | 11 | 114 |
| V. Philosophy | 7 | 7 | 10 | 7 | 21 | 15 | 13 | 11 | 11 | 16 | 6 | 13 | 4 | 141 |
| VI. Education | 3 | 3 | 1 | 3 | 4 | 3 | 2 | 5 | 5 | 3 | 1 | 9 | 6 | 48 |
| VII. The Fine Arts: | .. | .. | .. | 1 | 1 | .. | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 11 |
| History and Principles of the Fine Arts | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 4 |
| Architecture | .. | .. | .. | .. | 1 | .. | 1. | 2 | .. | 1 | 1 | .. | 1 | 7 |
| VIII. Music | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 3 | .. | 6 |
| IX. Mathematics | 7 | 5 | 4 | 6 | 6 | 1 | 6 | 6 | 9 | 1 | 3 | 8 | 10 | 72 |
| X. Physics | 2 | 4 | 3 | 5 | .. | 2 | 1 | 6 | 4 | 3 | 2 | 1 | 6 | 39 |
| XI. Chemistry | 2 | 5 | 4 | 5 | 4 | 4 | 2 | 8 | 6 | 9 | 9 | 9 | 5 | 72 |
| XII. Engineering | 1 | .. | 1 | .. | 1 | 1 | .. | 1 | 3 | 1 | 3 | .. | .. | 12 |
| XIII. Forestry | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 |
| XIV. Biology: | 8 | 9 | 8 | 6 | 3 | 4 | 5 | 4 | 2 | 6 | 3 | 2 | 5 | 65 |
| Botany | 5 | 4 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 2 | .. | 1 | 28 |
| Zoölogy | 3 | 5 | 5 | 3 | .. | 3 | 2 | 3 | 1 | 5 | 1 | 2 | 4 | 37 |
| XV. Geology: | 1 | 1 | 3 | 2 | 3 | 4 | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 31 |
| Geology and Geography | 1 | 1 | 3 | 2 | 3 | 4 | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 30 |
| Mineralogy and Petrography | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | | 1 |

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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XVI. Mining and Metallurgy | .. | .. | .. | .. | .. | .. | 4 | 2 | 1 | 3 | .. | 1 | .. | 11 |
| XVII. Anthropology | .. | 2 | .. | 1 | 1 | 1 | 1 | .. | .. | 1 | 1 | 1 | 3 | 12 |
| In more than one Division | 4 | 3 | 5 | 16 | 10 | 7 | 5 | 4 | 4 | 6 | 2 | 4 | 3 | 73 |
| Professional Students: | 8 | 13 | 7 | 8 | 7 | 8 | 10 | 5 | 15 | 10 | 16 | 8 | 8 | 123 |
| *Divinity School* | *6* | *9* | *5* | *4* | *4* | *5* | *5* | *4* | *12* | *6* | *10* | *6* | *4* | *80* |
| *Law School* | *2* | *3* | *1* | *2* | *3* | *2* | *3* | .. | *3* | *3* | *5* | *1* | *2* | *30* |
| *Medical School* | .. | *1* | *1* | *2* | .. | *1* | *2* | *1* | .. | *1* | *1* | *1* | *2* | *13* |
| **Total** | **98** | **113** | **107** | **123** | **132** | **124** | **124** | **128** | **164** | **142** | **118** | **130** | **123** | **1626** |

## TABLE IX. — RECOMMENDATIONS FOR THE DEGREE OF MASTER OF SCIENCE: 1898–1908

| DIVISION. DEPARTMENT. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mathematics** | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| **Physics** | 1 | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | 4 |
| **Chemistry** | .. | 1 | .. | .. | 3 | .. | .. | .. | 2 | 1 | 3 | 10 |
| **Engineering** | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 3 |
| **Biology** | 1 | 2 | .. | 3 | 1 | .. | 1 | 1 | 1 | 1 | .. | 11 |
| Botany | .. | *1* | .. | *2* | *1* | .. | *1* | .. | .. | .. | .. | *5* |
| Zoölogy | *1* | *1* | .. | *1* | .. | .. | .. | *1* | *1* | *1* | .. | *6* |
| **Geology** | 1 | 2 | 2 | 4 | 3 | 4 | 1 | .. | .. | .. | .. | 17 |
| Geology and Geography | *1* | *1* | *2* | *2* | *2* | *2* | .. | .. | .. | .. | .. | *10* |
| Mineralogy and Petrography | .. | *1* | .. | .. | .. | .. | .. | .. | .. | .. | .. | *1* |
| Mining and Metallurgy | .. | .. | .. | *2* | *1* | *2* | *1* | .. | .. | .. | .. | *6* |
| **Anthropology** | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| **Architecture** | .. | .. | .. | .. | .. | 2 | 1 | 2 | .. | .. | 1 | 6 |
| **Total** | **5** | **6** | **2** | **9** | **8** | **7** | **3** | **4** | **3** | **2** | **4** | **53** |

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TABLE VIII. — RECOMMENDATIONS FOR THE DEGREE OF MASTER OF ARTS BY DIVISIONS AND DEPARTMENTS: 1896–1908

| DIVISION. DEPARTMENT. | 1896. | 1897. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. Semitic Languages and History | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | 4 |
| II. Ancient Languages: | 15 | 18 | 11 | 20 | 21 | 13 | 17 | 14 | 18 | 11 | 9 | 10 | 9 | 186 |
| Indic Philology | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 3 |
| The Classics (Greek, Latin) | 15 | 17 | 11 | 20 | 21 | 13 | 16 | 13 | 18 | 11 | 9 | 10 | 9 | 183 |
| III. Modern Languages: | 23 | 23 | 30 | 21 | 30 | 28 | 27 | 32 | 42 | 32 | 29 | 35 | 34 | 386 |
| English | 11 | 12 | 14 | 13 | 19 | 14 | 15 | 19 | 28 | 22 | 15 | 24 | 25 | 231 |
| Germanic Languages and Literatures | 2 | 3 | 5 | 1 | 5 | 5 | 3 | 4 | 1 | 4 | 6 | 4 | 3 | 46 |
| French, and other Romance Languages and Literatures | 1 | 1 | 3 | 3 | 3 | 6 | 8 | 7 | 11 | 3 | 6 | 4 | 3 | 59 |
| Comparative Literature | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| In more than one Department | 9 | 7 | 8 | 4 | 3 | 3 | 1 | 2 | 2 | 3 | 2 | 3 | 2 | 49 |
| IV. History and Political Science: | 16 | 20 | 20 | 22 | 20 | 33 | 25 | 26 | 40 | 33 | 28 | 23 | 26 | 332 |
| History and Government | 9 | 13 | 15 | 18 | 16 | 24 | 10 | 13 | 23 | 22 | 18 | 18 | 15 | 213 |
| Political Economy | 2 | 7 | 5 | 4 | 4 | 9 | 15 | 14 | 17 | 11 | 10 | 5 | 11 | 114 |
| V. Philosophy | 7 | 7 | 10 | 7 | 21 | 15 | 13 | 11 | 11 | 16 | 6 | 13 | 4 | 141 |
| VI. Education | 3 | 3 | 1 | 3 | 4 | 3 | 2 | 5 | 5 | 3 | 1 | 9 | 6 | 48 |
| VII. The Fine Arts: | .. | .. | .. | 1 | 1 | .. | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 11 |
| History and Principles of the Fine Arts | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 4 |
| Architecture | .. | .. | .. | .. | 1 | .. | 1. | 2 | .. | 1 | 1 | .. | 1 | 7 |
| VIII. Music | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 3 | .. | 6 |
| IX. Mathematics | 7 | 5 | 4 | 6 | 6 | 1 | 6 | 6 | 9 | 1 | 3 | 8 | 10 | 72 |
| X. Physics | 2 | 4 | 3 | 5 | .. | 2 | 1 | 6 | 4 | 3 | 2 | 1 | 6 | 39 |
| XI. Chemistry | 2 | 5 | 4 | 5 | 4 | 4 | 2 | 8 | 6 | 9 | 9 | 9 | 5 | 72 |
| XII. Engineering | 1 | .. | 1 | .. | 1 | 1 | .. | 1 | 3 | 1 | 3 | .. | .. | 12 |
| XIII. Forestry | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 |
| XIV. Biology: | 8 | 9 | 8 | 6 | 3 | 4 | 5 | 4 | 2 | 6 | 3 | 2 | 5 | 65 |
| Botany | 5 | 4 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 2 | .. | 1 | 28 |
| Zoölogy | 3 | 5 | 5 | 3 | .. | 3 | 2 | 3 | 1 | 5 | 1 | 2 | 4 | 37 |
| XV. Geology: | 1 | 1 | 3 | 2 | 3 | 4 | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 31 |
| Geology and Geography | 1 | 1 | 3 | 2 | 3 | 4 | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 30 |
| Mineralogy and Petrography | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | | 1 |

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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XVI. Mining and Metallurgy | .. | .. | .. | .. | .. | .. | 4 | 2 | 1 | 3 | .. | 1 | .. | 11 |
| XVII. Anthropology | .. | 2 | .. | 1 | 1 | 1 | 1 | .. | .. | 1 | 1 | 1 | 3 | 12 |
| In more than one Division | 4 | 3 | 5 | 16 | 10 | 7 | 5 | 4 | 4 | 6 | 2 | 4 | 3 | 73 |
| Professional Students: | | | | | | | | | | | | | | |
| Divinity School | 8 | 13 | 7 | 8 | 7 | 8 | 10 | 5 | 15 | 10 | 16 | 8 | 8 | 123 |
| Law School | *6* | *9* | *5* | *4* | *4* | *5* | *5* | *4* | *12* | *6* | *10* | *6* | *4* | *80* |
| Medical School | *2* | *3* | *1* | *2* | *3* | *2* | *3* | .. | *3* | *3* | *5* | *1* | *2* | *30* |
| | .. | *1* | *1* | *2* | .. | *1* | *2* | *1* | .. | *1* | *1* | *1* | *2* | *13* |
| Total | 98 | 113 | 107 | 123 | 132 | 124 | 124 | 128 | 164 | 142 | 118 | 130 | 123 | 1626 |

## TABLE IX. — RECOMMENDATIONS FOR THE DEGREE OF MASTER OF SCIENCE: 1898–1908

| DIVISION. | DEPARTMENT. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mathematics | | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Physics | | 1 | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | 4 |
| Chemistry | | .. | 1 | .. | .. | 3 | .. | .. | .. | 2 | 1 | 3 | 10 |
| Engineering | | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 3 |
| Biology | | 1 | 2 | .. | 3 | 1 | .. | 1 | 1 | 1 | 1 | .. | 11 |
| Botany | | .. | *1* | .. | *2* | *1* | .. | *1* | .. | .. | .. | .. | *5* |
| Zoölogy | | *1* | *1* | .. | *1* | .. | .. | .. | *1* | *1* | *1* | .. | *6* |
| Geology | | 1 | 2 | 2 | 4 | 3 | 4 | 1 | .. | .. | .. | .. | 17 |
| Geology and Geography | | *1* | *1* | *2* | *2* | *2* | *2* | .. | .. | .. | .. | .. | *10* |
| Mineralogy and Petrography | | .. | *1* | .. | .. | .. | .. | .. | .. | .. | .. | .. | *1* |
| Mining and Metallurgy | | .. | .. | .. | *2* | *1* | *2* | *1* | .. | .. | .. | .. | *6* |
| Anthropology | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Architecture | | .. | .. | .. | .. | .. | 2 | 1 | 2 | .. | .. | 1 | 6 |
| Total | | 5 | 6 | 2 | 9 | 8 | 7 | 3 | 4 | 3 | 2 | 4 | 53 |

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TABLE VIII. — RECOMMENDATIONS FOR THE DEGREE OF MASTER OF ARTS BY DIVISIONS AND DEPARTMENTS: 1896–1908

| DIVISION. DEPARTMENT. | 1896. | 1897. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. Semitic Languages and History | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | 4 |
| II. Ancient Languages: | 15 | 18 | 11 | 20 | 21 | 13 | 17 | 14 | 18 | 11 | 9 | 10 | 9 | 186 |
| Indic Philology | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 3 |
| The Classics (Greek, Latin) | 15 | 17 | 11 | 20 | 21 | 13 | 16 | 13 | 18 | 11 | 9 | 10 | 9 | 183 |
| III. Modern Languages: | 23 | 23 | 30 | 21 | 30 | 28 | 27 | 32 | 42 | 32 | 29 | 35 | 34 | 386 |
| English | 11 | 12 | 14 | 13 | 19 | 14 | 15 | 19 | 28 | 22 | 15 | 24 | 25 | 231 |
| Germanic Languages and Literatures | 2 | 3 | 5 | 1 | 5 | 5 | 3 | 4 | 1 | 4 | 6 | 4 | 3 | 46 |
| French, and other Romance Languages and Literatures | 1 | 1 | 3 | 3 | 3 | 6 | 8 | 7 | 11 | 3 | 6 | 4 | 3 | 59 |
| Comparative Literature | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| In more than one Department | 9 | 7 | 8 | 4 | 3 | 3 | 1 | 2 | 2 | 3 | 2 | 3 | 2 | 49 |
| IV. History and Political Science: | 16 | 20 | 20 | 22 | 20 | 33 | 25 | 26 | 40 | 33 | 28 | 23 | 26 | 332 |
| History and Government | 9 | 13 | 15 | 18 | 16 | 24 | 10 | 12 | 23 | 22 | 18 | 18 | 15 | 215 |
| Political Economy | 2 | 7 | 5 | 4 | 4 | 9 | 15 | 14 | 17 | 11 | 10 | 5 | 11 | 114 |
| V. Philosophy | 7 | 7 | 10 | 7 | 21 | 15 | 13 | 11 | 11 | 16 | 6 | 13 | 4 | 141 |
| VI. Education | 3 | 3 | 1 | 3 | 4 | 3 | 2 | 5 | 5 | 3 | 1 | 9 | 6 | 48 |
| VII. The Fine Arts: | .. | .. | .. | 1 | 1 | .. | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 11 |
| History and Principles of the Fine Arts | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 4 |
| Architecture | .. | .. | .. | .. | 1 | .. | 1. | 2 | .. | 1 | 1 | .. | 1 | 7 |
| VIII. Music | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 3 | .. | 6 |
| IX. Mathematics | 7 | 5 | 4 | 6 | 6 | 1 | 6 | 6 | 9 | 1 | 3 | 8 | 10 | 72 |
| X. Physics | 2 | 4 | 3 | 5 | .. | 2 | 1 | 6 | 4 | 3 | 2 | 1 | 6 | 39 |
| XI. Chemistry | 2 | 5 | 4 | 5 | 4 | 4 | 2 | 8 | 6 | 9 | 9 | 9 | 5 | 72 |
| XII. Engineering | 1 | .. | 1 | .. | 1 | 1 | .. | 1 | 3 | 1 | 3 | .. | .. | 12 |
| XIII. Forestry | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 |
| XIV. Biology: | 8 | 9 | 8 | 6 | 3 | 4 | 5 | 4 | 2 | 6 | 3 | 2 | 5 | 65 |
| Botany | 5 | 4 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 2 | .. | 1 | 28 |
| Zoölogy | 3 | 5 | 5 | 3 | .. | 3 | 2 | 3 | 1 | 5 | 1 | 2 | 4 | 37 |
| XV. Geology: | 1 | 1 | 3 | 2 | 3 | 4 | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 31 |
| Geology and Geography | 1 | 1 | 3 | 2 | 3 | 4 | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 30 |
| Mineralogy and Petrography | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | | 1 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XVI. Mining and Metallurgy | .. | .. | .. | .. | .. | .. | 4 | 2 | 1 | 3 | .. | 1 | .. | 11 |
| XVII. Anthropology | .. | 2 | .. | 1 | 1 | 1 | 1 | .. | .. | 1 | 1 | 1 | 3 | 12 |
| In more than one Division | 4 | 3 | 5 | 16 | 10 | 7 | 5 | 4 | 4 | 6 | 2 | 4 | 3 | 73 |
| Professional Students: | | | | | | | | | | | | | | |
| Divinity School | 8 | 13 | 7 | 8 | 7 | 8 | 10 | 5 | 15 | 10 | 16 | 8 | 8 | 123 |
| Law School | *6* | *9* | *5* | *4* | *4* | *5* | *5* | *4* | *12* | *6* | *10* | *6* | *4* | *80* |
| Medical School | *2* | *3* | *1* | *2* | *3* | *2* | *3* | .. | *3* | *3* | *6* | *1* | *2* | *30* |
| | .. | *1* | *1* | *2* | .. | *1* | *2* | *1* | .. | *1* | *1* | *1* | *2* | *13* |
| Total | 98 | 113 | 107 | 123 | 132 | 124 | 124 | 128 | 164 | 142 | 118 | 130 | 123 | 1626 |

## TABLE IX. — RECOMMENDATIONS FOR THE DEGREE OF MASTER OF SCIENCE: 1898–1908

| DIVISION. | DEPARTMENT. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mathematics | | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Physics | | 1 | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | 4 |
| Chemistry | | .. | 1 | .. | .. | 3 | .. | .. | .. | 2 | 1 | 3 | 10 |
| Engineering | | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 3 |
| Biology | | 1 | 2 | .. | 3 | 1 | .. | 1 | 1 | 1 | 1 | .. | 11 |
| Botany | | .. | *1* | .. | *2* | *1* | .. | *1* | .. | .. | .. | .. | *5* |
| Zoölogy | | *1* | *1* | .. | *1* | .. | .. | .. | *1* | *1* | *1* | .. | *6* |
| Geology | | 1 | 2 | 2 | 4 | 3 | 4 | 1 | .. | .. | .. | .. | 17 |
| Geology and Geography | | *1* | *1* | *2* | *2* | *2* | *2* | .. | .. | .. | .. | .. | *10* |
| Mineralogy and Petrography | | .. | *1* | .. | .. | .. | .. | .. | .. | .. | .. | .. | *1* |
| Mining and Metallurgy | | .. | .. | .. | *2* | *1* | *2* | *1* | .. | .. | .. | .. | *6* |
| Anthropology | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Architecture | | .. | .. | .. | .. | .. | 2 | 1 | 2 | .. | .. | 1 | 6 |
| Total | | 5 | 6 | 2 | 9 | 8 | 7 | 3 | 4 | 3 | 2 | 4 | 53 |

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TABLE X. — RECOMMENDATIONS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY: 1896–1908

| DIVISION. | SUBJECT. | SPECIAL FIELD. | 1896. | 1897. | 1898. | 1899. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Semitic Languages and History. | Philology (154). | Semitic Philology | .. | 1 | 1 | 1 | .. | .. | .. | .. | 2 | .. | 1 | .. | 2 | 8 |
| Ancient Languages. | | Classical Philology | 3 | .. | 3 | 3 | 6 | 5 | 6 | 4 | 3 | 5 | 1 | 4 | 1 | 44 |
| | | Classical Archaeology | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | 3 |
| | | Biblical and Patristic Greek | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 |
| | | Indic Philology | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 | .. | .. | 5 |
| | | Comparative Philology | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Modern Languages | | English Philology | 1 | 4 | 5 | 2 | 6 | 1 | 3 | 4 | 3 | 2 | 5 | 6 | 6 | 48 |
| | | Germanic Philology | 1 | 1 | 1 | 1 | 1 | 1 | .. | 1 | .. | 1 | 3 | 3 | 1 | 15 |
| | | Romance Philology | .. | 2 | .. | 1 | .. | 1 | 4 | .. | 4 | 3 | 7 | 1 | 4 | 27 |
| | | Comparative Literature | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| History and Political Science. | History (38*). | American History | 2 | .. | 1 | 2 | 1 | .. | 1 | 2 | 2 | 2 | .. | .. | .. | 13 |
| | | English History | .. | 1 | .. | 1 | .. | 1 | 1 | .. | .. | 1 | 1 | 1 | 4 | 11 |
| | | European History | .. | .. | 2 | .. | 1 | 1 | .. | .. | 2 | 2 | .. | 1 | 3 | 12 |
| | Political Science (14*). | Economics | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 |
| | | Economic History | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 |
| | | Sociology | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 |
| | Economics (from 1905) (9*). | Economic History | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | 4 |
| | | Economic Theory | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Philosophy | Philosophy (66*) | History of Philosophy | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 4 |
| | | Philosophy of Religion | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 3 |
| | | Metaphysics | 1 | 2 | 1 | 1 | .. | 1 | .. | .. | 1 | 2 | .. | 1 | 1 | 11 |
| | | Ethics | .. | .. | .. | 2 | 1 | .. | .. | 1 | 2 | .. | 1 | .. | 3 | 10 |
| | | Logic | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | 1 | .. | 1 | 6 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Psychology | .. | 1 | 2 | 1 | 1 | 3 | 2 | 5 | 2 | 4 | .. | 3 | 1 | 25 |
| | | Aesthetics | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 2 |
| Music. | Music (2). | Orchestration | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| | | Modern French Music | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Mathematics | Mathematics (14*). | Analysis | .. | 2 | .. | .. | .. | 2 | 1 | 1 | 1 | 1 | .. | 1 | 2 | 11 |
| | | Celestial Mechanics | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Physics. | Physics (17*). | Electricity | 1 | .. | .. | .. | 2 | 3 | .. | 1 | 1 | 1 | .. | .. | 1 | 10 |
| | | Molecular Physics | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 |
| Chemistry. | Chemistry (39*). | Organic Chemistry | 3 | 2 | 2 | 1 | 2 | .. | 1 | 1 | 2 | 2 | 1 | 1 | .. | 18 |
| | | Inorganic Chemistry | .. | .. | 1 | 1 | 1 | 1 | 1 | .. | 1 | .. | 1 | 1 | .. | 8 |
| | | Physical Chemistry | .. | .. | .. | 1 | .. | 1 | .. | 3 | 1 | 1 | 1 | .. | 4 | 12 |
| Biology. | Biology† (49). | Botany | .. | .. | 1 | 2 | 1 | .. | 3 | .. | 5 | 1 | 2 | 1 | .. | 16 |
| | | Zoölogy | 2 | 2 | 2 | .. | 3 | 3 | 2 | 1 | 3 | 1 | 7 | 3 | 4 | 33 |
| Geology. | Geology† (12*). | General Geology | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 2 | .. | .. | 4 |
| | | Palaeontology | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Anthropology. | Anthropology (5). | Somatology | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 2 |
| | | Ethnology | .. | .. | .. | .. | 2 | .. | .. | .. | 1 | .. | .. | .. | .. | 3 |
| | | Total | 18* | 25* | 26* | 23* | 35* | 29* | 28* | 28 | 46* | 39* | 46* | 33* | 43* | 419* |

* Degrees have been conferred also in the following special fields not individually enumerated in the above table. Under History: Government (1902), Economic History (1907). Under Political Science: Public Finance (1899), Theory of Money (1900), the Institutions of the Old Régime in Canada (1900), Philosophy of Law (1900), Money (1901). Under Economics: Industrial Organization (1905), Sociology (1906), Transportation (1906), Public Finance (1907). Under Philosophy: Theology (2) (1899), Education (1905), Social Ethics (1907), Epistemology (1908). Under Mathematics: Pure Mathematics (1898), Geometry (1906). Under Physics: Light (2) (1900), Mathematical Physics (1906), Heat (1906), Radiation (1907). Under Chemistry: Physiological Chemistry (1904). Under Geology: Physical Geography (1896), Geology and Petrography (2) (1896), Dynamical and Experimental Geology (1897), Petrographical Geology (1901), Physical Geology (1901), Economic Geology (1904).

† Until 1898, Biology and Geology were classed together as Natural History.

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## TABLE XI. — RECOMMENDATIONS FOR DEGREES: 1896–1908 *

| | 1896. | | 1897. | | 1898. | | 1899. | | 1900. | | 1901. | | 1902. | | 1903. | | 1904. | | 1905. | | 1906. | | 1907. | | 1908. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. Graduate Students recommended for A.B. . | 16 | | 14 | | 18 | | 8 | | 10 | | 13 | | 11 | | 10 | | 3 | | 2 | | 1 | | .. | | .. | |
| Graduate Students recommended for A.M. | 83 | | 94 | | 91 | | 97 | | 106 | | 92 | | 94 | | 97 | | 113 | | 106 | | 85 | | 120 | | 115 | |
| Graduate Students recommended for S.M. . | .. | | .. | | 5 | | 6 | | 1 | | 9 | | 8 | | 6 | | 3 | | 4 | | 3 | | 2 | | 4 | |
| Graduate Students recommended for Ph.D. | 18 | | 25 | | 25 | | 21 | | 35 | | 29 | | 28 | | 28 | | 44 | | 38 | | 44 | | 31 | | 41 | |
| Graduate Students recommended for S.D. . | .. | 117 | 1 | 134 | .. | 139 | 1 | 133 | 1 | 153 | .. | 143 | 3 | 144 | 1 | 142 | 1 | 164 | .. | 150 | .. | 133 | 1 | 154 | .. | 160 |
| II. College Seniors recommended for A.M. . . | .. | | .. | | .. | | 2 | | .. | | 1 | | 1 | | 1 | | .. | | .. | | 1 | | .. | | .. | |
| College Seniors of a preceding year, recommended for A.M. on work done in Senior year. | 7 | | 6 | | 9 | | 16 | | 19 | | 23 | | 19 | | 24 | | 36 | | 26 | | 15 | | 1 | | .. | |
| College Juniors of a preceding year, recommended for A.M. on work done in Junior year. | .. | | .. | | .. | | .. | | .. | | .. | | .. | | 1 | | .. | | .. | | 1 | | 1 | | .. | |
| Professional students recommended for A.M. on special courses of study . . . . . | 8 | | 13 | | 7 | | 8 | | 7 | | 8 | | 10 | | 5 | | 15 | | 10 | | 16 | | 8 | | 8 | |
| Professional students recommended for Ph.D. on special courses of study . . . . . | .. | 15 | .. | 19 | 1 | 17 | 2 | 28 | .. | †27 | .. | 32 | .. | 30 | .. | †32 | 2 | 53 | 1 | 37 | 2 | 35 | 2 | 12 | 2 | 10 |
| Total of the above list . . . . . | | 132 | | 153 | | 156 | | 161 | | 180 | | 175 | | 174 | | 174 | | 217 | | 187 | | 168 | | 166 | | 170 |
| Deduct Graduate Students recommended for A.B. . . . . | | 16 | | 14 | | 18 | | 8 | | 10 | | 13 | | 11 | | 10 | | 3 | | 2 | | 1 | | .. | | .. |
| Total number recommended for A.M., S.M., Ph.D., and S.D. . . . . | | 116 | | 139 | | 138 | | 153 | | 170 | | 162 | | 163 | | 164 | | 214 | | 185 | | 167 | | 166 | | 170 |
| III. Harvard Bachelors of Arts or Science, not previously graduated elsewhere . . . . | 50 | | 57 | | 42 | | 65 | | 62 | | 59 | | 58 | | 68 | | 95 | | 78 | | 63 | | 66 | | 52 | |
| Harvard Bachelors of Arts or Science, previously graduated elsewhere . . . . . | 21 | | 24 | | 21 | | 20 | | 22 | | 20 | | 31 | | 12 | | 11 | | 3 | | 6 | | 8 | | 5 | |
| Students not Harvard Bachelors of Arts or Science . . . . . | 45 | 116 | 58 | 139 | 75 | 138 | 68 | 153 | 86 | 170 | 83 | 162 | 74 | 163 | 84 | 164 | 108 | 214 | 104 | 185 | 98 | 167 | 92 | 166 | 113 | 170 |

* The number of persons recommended each year, and that of the men who actually receive the degree, as published in the Annual Catalogue, do not always agree. Usually a few of the candidates recommended do not receive the degree at once. The degree is in these cases ordinarily conferred in a later year, "as of" the year in which the recommendation was made.

† Including one College Senior of a preceding year, recommended for S.M. on work done in Senior year.

‡ Including one L.S.S. fourth-year man of a preceding year, recommended for S M. on work done in L.S.S. fourth year.

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## TABLE XII. — RECOMMENDATIONS FOR THE DEGREE OF DOCTOR OF SCIENCE: 1896–1908

| YEAR. | SUBJECT. | SPECIAL FIELDS. |
|---|---|---|
| 1896 | None. | |
| 1897 | Natural History. | Zoölogy. |
| 1898 | None. | |
| 1899 | Biology. | Zoölogy. |
| 1900 | Geology. | Geology, Palaeontology. |
| 1901 | None. | |
| 1902 | Chemistry. | Organic Chemistry, Inorganic Chemistry. |
| | Biology. | Botany, Zoölogy. |
| | Geology. | General Geology, Glacial Geology. |
| 1903 | Anthropology. | American Archaeology, General Ethnology. |
| 1904 | Geology. | Metallurgy, Metallography. |
| 1905 | None. | |
| 1906 | None. | |
| 1907 | Biology. | Medical Zoölogy, Bacteriology. |
| 1908 | None. | |
| | Total, 9. | |

## TABLE XIII. — BIRTHPLACES OF GRADUATE STUDENTS: 1895–1908

| | 1895–96. | 1896–97. | 1897–98. | 1898–99. | 1899–1900. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Students born in the New England States | 131 | 141 | 121 | 143 | 122 | 127 | 107 | 122 | 168 | 132 | 149 | 131 | 131 |
| Students born in other Northern States east of the Mississippi River | 85 | 86 | 89 | 106 | 119 | 136 | 109 | 108 | 141 | 142 | 135 | 148 | 149 |
| Students born in Southern States east of the Mississippi River | 19 | 13 | 19 | 15 | 17 | 16 | 11 | 14 | 31 | 21 | 20 | 21 | 31 |
| Students born in States west of the Mississippi River | 25 | 25 | 26 | 30 | 34 | 30 | 39 | 39 | 35 | 42 | 44 | 44 | 59 |
| Students born in the Dominion of Canada | 16 | 17 | 18 | 25 | 23 | 21 | 22 | 16 | 17 | 19 | 24 | 28 | 26 |
| Students born in other foreign countries | 23 | 24 | 20 | 17 | 26 | 23 | 27 | 26 | 35 | 39 | 37 | 35 | 28 |
| Total number of students | 299 | 306 | 293 | 336 | 341 | 353 | 315 | 325 | 427 | 395 | 409 | 407 | 424 |
| Percentage of students born in New England | 44 | 46 | 41 | 43 | 36 | 36 | 34 | 38 | 39 | 33 | 37 | 32 | 31 |
| Percentage of students born elsewhere | 56 | 54 | 59 | 57 | 64 | 64 | 66 | 62 | 61 | 67 | 63 | 68 | 69 |

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## TABLE XIV. — FELLOWSHIPS AND SCHOLARSHIPS: 1896–1909

### 1. *Applications and Appointments*

| | 1896–97 | 1897–98 | 1898–99 | 1899–00 | 1900–01 | 1901–02 | 1902–03 | 1903–04 | 1904–05 | 1905–06 | 1906–07 | 1907–08 | 1908–09 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Spring applicants for reappointment or promotion | 48 | 50 | 47 | 48 | 51 | 42 | 46 | 42 | 51 | 46 | 57 | 48 | 61 |
| Spring applicants for a first appointment | 250 | 225 | 222 | 30 | 256 | 225 | 210 | 202 | 207 | 211 | 222 | 233 | 224 |
| Later applicants | 33 331 | 29 304 | 38 307 | 276 354 | 47 354 | 56 323 | 57 313 | 60 304 | 58 316 | 44 301 | 44 323 | 39 320 | 36 321 |
| Appointed to fellowships | 19 | 21 | 20 | 20 | 19 | 21 | 21 | 23 | 22 | 21 | 27 | 23 | 22 |
| Appointed to scholarships | 48 | 50 | 48 | 58 | 57 | 46 | 50 | 55 | 59 | 54 | 61 | 73 | 93 |
| Appointed instructors, teaching fellows, or assistants | 17 84 | 20 91 | 14 82 | 21 99 | 27 103 | 13 80 | 28 99 | 23 101 | 22 103 | 25 100 | 28 116 | 26 122 | 32 147 |
| Deduct for repetitions | 1 | 2 | 2 | 1 | 1 | 0 | 4 | 3 | 4 | 2 | 7 | 5 | 6 |
| | 83 | 89 | 80 | 98 | 102 | 80 | 95 | 98 | 99 | 98 | 109 | 117 | 141 |
| Entered or continued in the Graduate School of Arts and Sciences without receiving any of the above-named appointments | 51 | 55 | 76 | 64 | 66 | 68 | 55 | 62 | 73 | 38 | 50 | 50 | 36 |
| Entered undergraduate classes of Harvard College | 6 | 8 | 4 | 11 | 3 | 3 | 8 | 0 | 0 | 1 | 2 | 3 | 1 |
| Entered other Departments of the University | 8 65 | 10 73 | 5 85 | 3 78 | 4 73 | 4 75 | 5 68 | 3 65 | 2 75 | 1 40 | 3 55 | 2 55 | 6 43 |
| **Applicants who were at the University in the year following their applications** | 148 | 162 | 165 | 176 | 175 | 155 | 163 | 163 | 174 | 138 | 164 | 172 | 184 |
| **Applicants not at the University in that year** | 183 | 142 | 142 | 178 | 179 | 168 | 150 | 141 | 142 | 163 | 159 | 143 | 137 |
| | 331 | 304 | 307 | 354 | 354 | 323 | 313 | 304 | 316 | 301 | 323 | 320 | 321 |

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## 2. *Classification of Applicants and Appointees*

| | 1896-97 | | 1897-98 | | 1898-99 | | 1899-1900 | | 1900-01 | | 1901-02 | | 1902-03 | | 1903-04 | | 1904-05 | | 1905-06 | | 1906-07 | | 1907-08 | | 1908-09 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. | Applicants. | Appointees. |
| Students of Philology | 122 | 24 | 101 | 23 | 107 | 24 | 132 | 25 | 128 | 27 | 112 | 19 | 115 | 22 | 118 | 24 | 138 | 23 | 122 | 25 | 124 | 28 | 130 | 32 | 128 | 42 |
| Students of Philosophy, History, or Political Science | 109 | 20 | 103 | 19 | 106 | 19 | 119 | 24 | 123 | 23 | 97 | 21 | 101 | 21 | 100 | 23 | 92 | 29 | 85 | 21 | 105 | 28 | 91 | 28 | 100 | 36 |
| Students of Mathematics, Physics, or Chemistry | 59 | 14 | 60 | 19 | 55 | 17 | 62 | 17 | 61 | 15 | 67 | 16 | 55 | 17 | 52 | 19 | 51 | 17 | 61 | 15 | 62 | 15 | 64 | 21 | 66 | 25 |
| Students of Natural History | 39 | 9 | 38 | 10 | 35 | 7 | 37 | 11 | 38 | 11 | 44 | 11 | 34 | 8 | 30 | 9 | 28 | 8 | 25 | 11 | 22 | 10 | 26 | 10 | 19 | 8 |
| Students of other branches, or unclassified | 2 | .. | 2 | .. | 4 | 1 | 4 | 1 | 4 | .. | 3 | .. | 8 | 3 | 4 | 3 | 7 | 4 | 8 | 3 | 10 | 7 | 9 | 5 | 8 | 4 |
| | 331 | 67 | 304 | 71 | 307 | 68 | 354 | 78 | 354 | 76 | 323 | 67 | 313 | 71 | 304 | 78 | 316 | 81 | 301 | 75 | 323 | 88 | 320 | 96 | 321 | 115 |
| Students in Graduate School of Arts and Sciences | 119 | 46 | 104 | 43 | 115 | 43 | 111 | 51 | 110 | 49 | 109 | 33 | 80 | 41 | 93 | 41 | 108 | 42 | 99 | 50 | 103 | 45 | 91 | 40 | 121 | 56 |
| Students in Harvard College | 39 | 8 | 29 | 6 | 25 | 6 | 39 | 2 | 43 | 6 | 28 | 6 | 35 | 6 | 42 | 16 | 25 | 6 | 19 | 3 | 23 | 5 | 28 | 10 | 21 | 6 |
| Students in other Departments of the University | 3 | .. | 6 | 1 | 6 | 1 | 7 | 1 | 3 | 1 | 4 | .. | 5 | 1 | 7 | 2 | 11 | 5 | 3 | 2 | 6 | 2 | 7 | 3 | 3 | 1 |
| Former students in some Department of the University | 21 | 5 | 27 | 2 | 28 | 5 | 28 | 3 | 38 | 7 | 16 | 4 | 36 | 5 | 33 | 9 | 23 | 5 | 26 | 2 | 31 | 12 | 35 | 15 | 35 | 10 |
| Persons never previously members of the University | 149 | 8 | 138 | 19 | 133 | 13 | 169 | 21 | 160 | 13 | 166 | 24 | 157 | 18 | 129 | 10 | 149 | 23 | 154 | 18 | 160 | 24 | 159 | 28 | 141 | 42 |
| | 331 | 67 | 304 | 71 | 307 | 68 | 354 | 78 | 354 | 76 | 323 | 67 | 313 | 71 | 304 | 78 | 316 | 81 | 301 | 75 | 323 | 88 | 320 | 96 | 321 | 115 |
| Harvard Bachelors of Arts or Science, not previously graduated elsewhere | 38 | 19 | 38 | 15 | 35 | 16 | 37 | 15 | 31 | 8 | 29 | 10 | 23 | 9 | 32 | 16 | 32 | 12 | 36 | 16 | 39 | 18 | 32 | 16 | 36 | 18 |
| Harvard Bachelors of Arts or Science, previously graduated elsewhere | 29 | 10 | 23 | 5 | 21 | 5 | 15 | 5 | 24 | 6 | 17 | 6 | 23 | 9 | 11 | 2 | 13 | 2 | 14 | 3 | 8 | 3 | 9 | 5 | 7 | 2 |
| Graduates of other institutions, not Harvard Bachelors of Arts or Science | 201 | 36 | 187 | 47 | 207 | 42 | 244 | 54 | 237 | 59 | 235 | 49 | 210 | 46 | 204 | 44 | 219 | 56 | 209 | 50 | 220 | 58 | 234 | 58 | 222 | 72 |
| Undergraduates of Harvard College or Lawrence Scientific School, not already graduated elsewhere | 21 | 2 | 21 | 4 | 19 | 5 | 26 | 2 | 28 | 3 | 19 | 2 | 26 | 7 | 36 | 14 | 28 | 9 | 22 | 5 | 29 | 8 | 26 | 10 | 23 | 6 |
| Undergraduates of other institutions and other non-graduates | 42 | .. | 35 | .. | 25 | .. | 32 | 2 | 34 | .. | 23 | .. | 31 | .. | 21 | 2 | 24 | 2 | 20 | 1 | 27 | 1 | 19 | 7 | 33 | 17 |
| | 331 | 67 | 304 | 71 | 307 | 68 | 354 | 78 | 354 | 76 | 323 | 67 | 313 | 71 | 304 | 78 | 316 | 81 | 301 | 75 | 323 | 88 | 320 | 96 | 321 | 115 |

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TABLE XV. — COLLEGES AND UNIVERSITIES REPRESENTED BY FOUR OR MORE GRADUATES IN THE SCHOOL: 1903–04, 1904–05, 1905–06, 1906–07, 1907–08

| 1903–04. | | 1904–05. | | 1905–06. | | 1906–07. | | 1907–08. | |
|---|---|---|---|---|---|---|---|---|---|
| Harvard, | 232 | Harvard, | 192 | Harvard, | 197 | Harvard, | 185 | Harvard, | 182 |
| Amherst, | 14 | Ohio Wesleyan, | 14 | Brown, | 12 | Dartmouth, | 10 | Amherst, | 10 |
| Brown, | 12 | Dartmouth, | 9 | Ohio Wesleyan, | 12 | Boston Univ., | 8 | Michigan, | 9 |
| Dartmouth, | 12 | Amherst, | 8 | Michigan, | 10 | Toronto, | 8 | Brown, | 8 |
| Michigan, | 10 | Williams, | 8 | Amherst, | 8 | Amherst, | 7 | Dartmouth, | 8 |
| Yale, | 9 | Brown, | 7 | Yale, | 8 | Columbia, | 7 | Rochester, | 8 |
| Ohio Wesleyan, | 8 | Yale, | 6 | Boston Univ., | 7 | Yale, | 7 | Williams, | 7 |
| Bowdoin, | 7 | Boston Univ., | 5 | Williams, | 7 | Michigan, | 6 | Brown, | 6 |
| Haverford, | 7 | Bowdoin, | 5 | Cornell Univ., | 6 | Vanderbilt, | 6 | Bowdoin, | 6 |
| Williams, | 7 | Cornell Univ., | 5 | Dartmouth, | 6 | Bowdoin, | 5 | California, | 6 |
| Tufts, | 6 | Haverford, | 5 | Haverford, | 5 | California, | 5 | Texas, | 6 |
| West Virginia, | 6 | Leland Stanford Jr., | 5 | Chicago, | 4 | Cornell Univ., | 5 | Yale, | 6 |
| Boston Univ., | 5 | State Univ. of Iowa, | 5 | Columbia, | 4 | Haverford, | 5 | Columbia, | 5 |
| Columbia, | 5 | Michigan, | 5 | Dalhousie, | 4 | Indiana, | 5 | Indiana, | 5 |
| Texas, | 5 | Rochester, | 5 | Indiana, | 4 | Kansas, | 5 | Ohio Wesleyan, | 5 |
| Leland Stanford Jr., | 4 | Toronto, | 5 | Rochester, | 4 | Missouri, | 5 | Chicago, | 4 |
| Trinity (Conn.), | 4 | Bates, | 4 | Vanderbilt, | 4 | Queen's, | 5 | George Washington, | 4 |
| California, | 4 | Missouri, | 4 | | | Rochester, | 5 | Leland Stanford Jr., | 4 |
| Pennsylvania, | 4 | Pennsylvania, | 4 | | | Acadia, | 4 | Mass. Inst. of Tech., | 4 |
| Toronto, | 4 | Vanderbilt, | 4 | | | Brown, | 4 | Missouri, | 4 |
| Wesleyan (Conn.), | 4 | | | | | Chicago, | 4 | Mt. Allison, | 4 |
| | | | | | | Ohio Wesleyan, | 4 | Princeton, | 4 |
| | | | | | | Princeton, | 4 | Toronto, | 4 |
| | | | | | | State Univ. of Iowa, | 4 | Vanderbilt, | 4 |
| | | | | | | | | Washington, | 4 |
| Total Membership, | 427 | | 395 | | 409 | | 407 | | 424 |

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The degree of Doctor of Philosophy was conferred upon the forty-three men named below. With each name are indicated the subject and the special field in which the degree was taken, the candidate's academic degrees, the subject of his thesis, and his present occupation.

HARRY MORGAN AYRES, A.B. 1902.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Dramatic History of Julius Caesar in the Renaissance." Lecturer on English Literature, Columbia University.

HERMAN BABSON, A.B. (*Amherst Coll.*) 1893, A.M. (*ibid.*) 1896.
*Subject*, Philology. *Special Field*, Germanic Philology. *Thesis*, "The Modern German Fairy Drama." Professor of the German Language and Literature, College of Hawaii, Honolulu.

JOHN HAMILTON BLAIR, A.B. (*Cornell Univ., N. Y.*) 1901, A.M. (*ibid.*) 1902.
*Subject*, History. *Special Field*, Modern European History. *Thesis*, "The Policy of the Emperor Joseph II in regard to Religious Toleration." Instructor in History, Leland Stanford Jr. University.

PERCY WILLIAMS BRIDGMAN, A.B. 1904, A.M. 1905.
*Subject*, Physics. *Special Field*, Molecular Physics. *Thesis*, "Mercury Resistance as a Pressure Gauge." Assistant in Physics at this University.

EDMUND KEMPER BROADUS, A.B. (*Columbian Univ.*) 1897, A.M. (*Univ. of Chicago*) 1900.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "Addison as a Literary Critic." Professor of English, University of Alberta.

MORLEY ALBERT CALDWELL, A.B. (*Indiana Univ.*) 1904, A.M. (*ibid.*) 1905.
*Subject*, Philosophy. *Special Field*, Ethics. *Thesis*, "Does Pragmatism involve Indeterminism?" Professor of Philosophy, Ursinus College.

BARRY H CERF, A.B. (*Univ. of California*) 1902, A.M. (*ibid.*) 1903.
*Subject*, Philology. *Special Field*, Romance Philology. *Thesis*, "A Classification of the Manuscripts of *Ogier le Danois*." Instructor in Romance Languages, University of Wisconsin.

PHILIP HUDSON CHURCHMAN, A.B. (*Princeton Univ.*) 1896, A.M. (*ibid.*) 1903.
*Subject*, Philology. *Special Field*, Romance Philology. *Thesis*, "Lord Byron and the Spanish Peninsula." Assistant Professor of Romance Languages, Clark College.

WALTER HAROLD CLAFLIN, A.B. 1902, A.M. 1903.
*Subject*, History. *Special Field*, History of Modern Russia. *Thesis*, "The Prussian Campaigns of Gustavus Adolphus, 1626–1629: A Military Study." Teacher of History, Redlands High School, Cal.

MANTON COPELAND, S.B. 1904, S.M. 1905.
*Subject*, Biology. *Special Field*, Zoölogy. *Thesis*, "Spermatogenesis in Apis and Vespa." Instructor in Biology, Bowdoin College.

WILLIAM ROBERT PARKHOUSE DAVEY, A.B. (*Brown Univ.*) 1902, A.M. (*ibid.*) 1902, S.T.B. (*Harvard Univ.*) 1905.
*Subject*, Philology. *Special Field*, Semitic Philology. *Thesis*, "Semitic Phallicism: Preceded by a Sketch of Non-Semitic Phallicism." Austin Teaching Fellow in Semitic Languages at this University.

ARCHIBALD THOMPSON DAVISON, JR., A.B. 1906, A.M. 1907.
*Subject*, Music. *Special Field*, Modern French Music. *Thesis*, "The Harmonic Contributions of Claude Debussy." Studying Organ and Composition at Paris.

HARRY LOUIS FREVERT, A.B. 1905.
*Subject*, Chemistry. *Special Field*, Physical Chemistry. *Thesis*, "Investigations in Chemical Thermodynamics." Instructor in Chemistry at this University.

ELIOTT PARK FROST, A.B. (*Dartmouth Coll.*) 1905, A.M. (*ibid.*) 1906.
*Subject*, Philosophy. *Special Field*, Psychology. *Thesis*, "The Psychology and Correlation of Individual Differences." Continuing his studies at Berlin, as James Walker Fellow.

RAYMOND DEXTER HAVENS, A.B. (*Univ. of Rochester*) 1902.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Influence of Milton on English Poetry: 1667–1832." Instructor in English, University of Rochester.

RICHMOND LAURIN HAWKINS, A.B. (*Univ. of Missouri*) 1899, A.M. (*ibid.*) 1900, A.B. (*Harvard Univ.*) 1903, A.M. (*ibid.*) 1906.
*Subject*, Philology. *Special Field*, Romance Philology. *Thesis*, "The Life and Works of Maistre Charles Fontaine Parisien." Instructor in Romance Languages.

MORLEY DE WOLFE HEMMEON, A.B. (*Acadia Univ.*) 1888, A.M. (*Harvard Univ.*) 1906.
*Subject*, History. *Special Field*, English History. *Thesis*, "Burgage Tenure in England." Instructor in History, Western Reserve University.

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JAY WILLIAM HUDSON, A.B. (*Univ. of California*) 1905, A.M. (*ibid.*) 1906.
*Subject*, Philosophy. *Special Field*, Metaphysics. *Thesis*, "The Treatment of Personality by Locke, Berkeley, and Hume." Assistant Professor of Philosophy, University of Michigan.

FRANK IRWIN, A.B. 1890, S.B. 1891, A.M. 1894.
*Subject*, Mathematics. *Special Field*, Analysis. *Thesis*, "The Invariants of Linear Differential Expressions." Instructor in Mathematics, Princeton University.

GRINNELL JONES, S.B. (*Vanderbilt Univ.*) 1903, S.M. (*ibid.*) 1905, A.M. (*Harvard Univ.*) 1905.
*Subject*, Chemistry. *Special Field*, Physical and Inorganic Chemistry. *Thesis*, I. "The Atomic Weights of Sulphur and Phosphorus." II. "The Compressibilities of certain Salts." Instructor in Chemistry, University of Illinois.

ISYA JOSEPH, A.B. (*Columbia Univ.*) 1906, S.T.B. (*Union Theol. Seminary*) 1906, A.M. (*Columbia Univ.*) 1907
*Subject*, Philology. *Special Field*, Semitic Philology. *Thesis*, "The Yezidis, or Devil-Worshippers: Their Sacred Book and Traditions." Studying in Union Theological Seminary, as a candidate for the degree of Doctor of Divinity.

HORACE MEYER KALLEN, A.B. 1903.
*Subject*, Philosophy. *Special Field*, Ethics. *Thesis*, "Notes on the Nature of Truth." Assistant in Philosophy.

JOHN SAMUEL KENYON, A.B. (*Hiram Coll.*) 1898, A.M. (*Univ. of Chicago*) 1903.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Infinitive in Chaucer." Professor of English, Butler College.

WALDEMAR KLOSS, A.B. (*Washington Univ.*) 1905, A.M. (*Harvard Univ.*) 1907.
*Subject*, Philosophy. *Special Field*, History of Philosophy. *Thesis*, "The Place of Desiderius Erasmus in the History of Philosophy." Teacher of German, Schenectady High School, N.Y.

HENRY GODDARD LEACH, A.B. (*Princeton Univ.*) 1903, A.M. (*Harvard Univ.*) 1906.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Relations between England and Scandinavia in History and Literature from 1066 to 1399." Continuing his studies at Copenhagen, as Edward William Hooper Fellow.

JOSEPH ABRAHAM LONG, S.B. 1904, A.M. 1905.
*Subject*, Biology. *Special Field*, Zoölogy. *Thesis*, "The Maturation of the Egg of the Mouse." Instructor in Zoölogy, University of California.

CHARLES BUTLER LOUGHEAD, A.B. 1903, A.M. 1904.
*Subject*, Philology. *Special Field*, Classical Philology. *Thesis*, "De Usu ἀντιθέσεως apud Herodotum." Teacher, Wesleyan Academy, Wilbraham.

WILLIAM EDWARD LUNT, A.B. (*Bowdoin Coll.*) 1904, A.M. (*Harvard Univ.*) 1905.
*Subject*, History. *Special Field*, English History. *Thesis*, "The Financial Relations between the Papacy and England during the Reigns of Edward I and Edward II." Instructor in History, University of Wisconsin.

RAY MADDING MCCONNELL, A.B. (*Southern Univ.*) 1899, S.T.B. (*Vanderbilt Univ.*) 1901, A.M. (*Harvard Univ.*) 1902.
*Subject*, Philosophy. *Special Field*, Ethics. *Thesis*, "The Ground of Moral Obligation." Assistant in Social Ethics.

WALTER WALLACE MCLAREN, A.M. (*Queen's Univ.*) 1899, S.T.B. (*ibid.*) 1902.
*Subject*, Economics. *Special Field*, Economic History. *Thesis*, "The Tariff History of Canada." Professor of Economics and Politics, Keiogijuku University, Tokyo, Japan.

JOSEPH HOWARD MATHEWS, S.B. (*Univ. of Wisconsin*) 1903, A.M. (*ibid.*) 1905, A.M. (*Harvard Univ.*) 1906.
*Subject*, Chemistry. *Special Field*, Physical Chemistry. *Thesis*, "A Study of Compressibility and its Relation to various other Physical Properties of certain Organic Compounds." Instructor in Physical Chemistry, University of Wisconsin.

CHARLES NAPOLEON MOORE, A.B. (*Univ. of Cincinnati*) 1903, S.M. (*George Washington Univ.*) 1905.
*Subject*, Mathematics. *Special Field*, Analysis. *Thesis*, "On the Theory of Convergence Factors and some of its Applications." Instructor in Mathematics, University of Cincinnati.

ROLLIN CLARKE MULLENIX, A.B. (*Wheaton Coll.*) 1895, A.M. (*ibid.*) 1897.
*Subject*, Biology. *Special Field*, Zoölogy. *Thesis*, "The Peripheral Terminations of the Eighth Cranial Nerve in Vertebrates, especially in Fishes." Professor of Biology, Yankton College.

FREDERIC AUSTIN OGG, PH.B. (*De Pauw Univ.*) 1899, A.M. (*Indiana Univ.*) 1900, A.M. (*Harvard Univ.*) 1904.
*Subject*, History. *Special Field*, American History. *Thesis*, "Slave Property as an Issue in Anglo-American Diplomacy, 1782–1828." Instructor in History, Simmons College, and Assistant in History at this University.

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DeWitt Henry Parker, A.B. 1906.
*Subject*, Philosophy. *Special Field*, Epistemology. *Thesis*, "The Nature and Object of Historical Knowledge." Instructor in Philosophy, University of Michigan.

Arthur Sperry Pearse, S.B. (*Univ. of Nebraska*) 1900, A.M. (*ibid.*) 1904.
*Subject*, Biology. *Special Field*, Zoölogy. *Thesis*, "The Reactions of Amphibians to Light." Instructor in Zoölogy, University of Michigan.

Clarence Perkins, A.B. (*Syracuse Univ.*) 1901, A.M. (*Harvard Univ.*) 1904.
*Subject*, History. *Special Field*, English History. *Thesis*, "The History of the Knights Templars in England." Instructor in History, University of Missouri.

Eber Carle Perrow, A.B. (*Trinity Coll., N.C.*) 1903, A.M. (*ibid.*) 1905.
*Subject*, Philology. *Special Field*, English Philology. *Thesis*, "The Last Will and Testament as a Form of Literature." Assistant Professor of English, University of Mississippi.

Conyers Read, A.B. 1903, A.M. 1904.
*Subject*, History. *Special Field*, Modern European History. *Thesis*, "The Life of Sir Francis Walsingham to 1578." Continuing his studies at London, as John Harvard Fellow.

Henry Maurice Sheffer, A.B. 1905, A.M. 1907.
*Subject*, Philosophy. *Special Field*, Logic and Psychology. *Thesis*, "A Programme of Philosophy, based on Modern Logic." Assistant in Philosophy.

Conrad Louis Benoni Shuddemagen, S.B. (*Univ. of Texas*) 1902, S.M. (*ibid.*) 1904.
*Subject*, Physics. *Special Field*, Electricity and Magnetism. *Thesis*, I. "The Demagnetizing Factors for Cylindrical Iron Rods." II. "A Study of Residual Charge in Dielectrics." Instructor in Physics, University of Texas.

Arthur Fisher Whittem, A.B. 1902, A.M. 1903.
*Subject*, Philology. *Special Field*, Romance Philology. *Thesis*, "The Sources of the Fables in Juan Ruiz's *Libro de Buen Amor*." Instructor in Romance Languages.

John Hunt Wilson, S.B. (*Lafayette Coll.*) 1905, S.M. (*Harvard Univ.*) 1907.
*Subject*, Chemistry. *Special Field*, Physical and Inorganic Chemistry. *Thesis*, I. "A Revision of the Atomic Weight of Lead." II. "Energy Changes involved in the Dilution of Amalgams of Thallium, Indium, and Tin." Research Assistant in Pathology.

Thirty fellowships were assigned for the year 1907–08, including three John Harvard Fellowships without stipend. There were thirteen resident and seventeen non-resident appointments. A list of the incumbents follows. After the name of each fellow is given the name of his fellowship, the subject that he studied, and his present occupation. The place of study of the non-resident fellows is also indicated.

## NON-RESIDENT FELLOWS.

Charles Scott Berry, James Walker Fellow. Philosophy. Berlin.
Assistant Professor of Psychology, University of Michigan.

Warren Barton Blake, John Harvard Fellow. Modern Languages. Paris.
Engaged in newspaper work. Philadelphia.

Joseph Henry Breck, Harris Fellow. Fine Arts. Italy.
Thayer Scholar. Second-year Graduate student.

Howard Levi Gray, Edward William Hooper Fellow. History and Political Science. London.
Instructor in History at this University.

Arthur Norman Holcombe, Rogers Fellow. Economics. Berlin and Munich.
Reappointed. Continuing his studies at Paris.

Leroy Albert Howland, Parker Fellow. Mathematics. Munich.
Associate Professor of Mathematics, Wesleyan University, Connecticut.

Alexander Edward Hoyle, Nelson Robinson Jr. Fellow. Architecture. Rome.
Architectural draughtsman, Boston.

Horace Meyer Kallen, Henry Bromfield Rogers Memorial Fellow. Philosophy. Oxford.
Assistant in Philosophy at this University.

Arthur Ware Locke, Rogers Fellow. Music. Berlin.
Reappointed. Continuing his studies at Berlin.

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DEAN PUTNAM LOCKWOOD, Parker Fellow. Classics. Rome.
Continuing his studies at Rome, as Carnegie Fellow of the American School of Classical Studies.

WILLIAM EDWARD LUNT, Ozias Goodwin Memorial Fellow. History. London.
Instructor in History, University of Wisconsin.

HENRY NOBLE MACCRACKEN, John Harvard Fellow. English. Oxford.
Instructor in English, Yale University.

PERCY ALVIN MARTIN, John Thornton Kirkland Fellow. History and Government. Berlin.
Instructor in History, Leland Stanford Jr. University.

CHARLES HANSEN TOLL, John Harvard Fellow. Philosophy. Berlin and Freiburg.
Continuing his studies at Freiburg.

RALPH WESLEY VARNEY, Julia Amory Appleton Fellow. Architecture. Rome.
Reappointed. Continuing his studies in Europe.

CHARLES EDWARD WHITMORE, Charles Eliot Norton Fellow. Classics. Athens.
Townsend Scholar. Second-year Graduate student.

KARL YOUNG, Parker Fellow. English. Paris.
Assistant Professor of English, University of Wisconsin.

## RESIDENT FELLOWS

PERCY WILLIAMS BRIDGMAN, John Tyndall Scholar. Physics.
Assistant in Physics at this University.

SOLON JUSTUS BUCK, Francis Parkman Fellow. History.
Instructor in History, University of Indiana.

ROBERT FRANZ FOERSTER, Robert Treat Paine Fellow. Social Science
Assistant in Social Ethics. Third-year Graduate student.

IRWIN HAYDEN, Hemenway Fellow. Anthropology.
Residing at Winthrop, Mass.

WILLIAM BRODBECK HERMS, Edward Austin Fellow. Zoölogy.
Assistant Professor of Entomology, University of California.

DAVID HEATH HOWIE, Fellow in Social Education. Education.
Reappointed. Second-year Graduate student.

GRINNELL JONES, Edward Austin Fellow. Chemistry.
Instructor in Chemistry, University of Illinois.

THEODORE FRANCIS JONES, Edward Austin Fellow. History.
Austin Teaching Fellow in History.

ALBERT JOSEPH KENNEDY, South End House Fellow. Economics.
Secretary of the Settlement Investigation conducted upon the Sage Foundation.

RAYMOND EDWIN MERWIN, Hemenway Fellow. Anthropology.
Reappointed. Third-year Graduate student.

EDMUND THORNTON MILLER, Henry Lee Memorial Fellow. Economics.
Austin Teaching Fellow in Economics. Fourth-year Graduate student.

SYLVANUS GRISWOLD MORLEY, Fellow in Central American Archaeology. Anthropology.
Continuing his studies in Yucatan, as Fellow of the Archaeological Institute of America.

EBER CARLE PERROW, Edward Austin Fellow. English.
Assistant Professor of English, University of Mississippi.

The Association of American Universities, founded in 1900 for the purpose of considering matters of common interest relating to graduate study, held its ninth annual conference at Ann Arbor, Michigan, on January 9 and 10, 1908. All the members were represented by delegates, save Clark University; and it was voted to admit to membership the Universities of Illinois, Minnesota, and Missouri. The Association now consists of eighteen universities: California, the Catholic University of America, Chicago, Clark,

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Columbia, Cornell, Harvard, Illinois, Johns Hopkins, Leland Stanford Jr., Michigan, Minnesota, Missouri, Pennsylvania, Princeton, Virginia, Wisconsin, and Yale. Harvard was represented at the conference by Professors Clifford H. Moore and Edwin F. Gay. A paper upon "The Doctor's Dissertation: Selection of Subject, Preparation, Acceptance, Publication," was read by Professor Albion W. Small of the University of Chicago. The paper incorporated a number of important comments and statements, furnished by chairmen of Divisions of the Harvard Faculty of Arts and Sciences. Copies of the report of the conference, containing Professor Small's paper, may be obtained by those interested upon application to the Secretary of the Association, Mr. Joseph Warren, 5 University Hall, Cambridge.

It is probable that no like institution ever derived so large a proportion of its income from tuition fees as does the Graduate School of Arts and Sciences. For the last thirteen years, the figures are as given below: —

| | | |
|---|---|---|
| 1895–96..$29,340.00 | 1900–01..$40,635.25 | 1904–05..$45,718.84 |
| 1896–97.. 34,426.50 | 1901–02.. 37,850.00 | 1905–06.. 45,892.50 |
| 1897–98.. 33,463.84 | 1902–03.. 37,810.01 | 1906–07.. 46,285.00 |
| 1898–99.. 38,714.75 | 1903–04.. 50,152.14 | 1907–08.. 49,269.00 |
| 1899–00.. 40,583.63 | | |

The trifling fees paid by the students under the Philosophical Faculties of European universities, a few dollars only a semester, need be but mentioned. A brief conspectus of tuition charges levied upon students in the Graduate Schools or Departments of the Association of American Universities may, however, be of value: —

*California*. Free to residents of the state; non-residents, $20.
*Catholic University of America*. Candidates for Ph.D. and A.M., $75; special students, $20 per department.
*Chicago*, $120.
*Clark*, $100.
*Columbia*, $150.
*Cornell*, $100.
*Harvard*, $150.
*Illinois*, Free.
*Johns Hopkins*, $150.
*Leland Stanford Jr.*, Free.
*Michigan*, Residents of the state, $30; others, $40.
*Minnesota*, $20.
*Missouri*, Free.
*Pennsylvania*, $75 to $150.
*Princeton*, Not to exceed $40.
*Virginia*, Virginians, $10; others, $90 to $130.
*Wisconsin*, Free.
*Yale*, "Generally $100; but it may be more, or less."

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On the basis of these figures, and of the number of students announced as enrolled in the several Graduate Schools, one might suppose that in most of the institutions included in the above list the receipts from Graduate students form a material addition to the funds available for instruction. A further study, however, would show such a deduction to be ill-advised. To speak of specially endowed fellowships and scholarships is, of course, beside the mark, since these do not constitute a drain upon the general university funds; but it is pertinent to note that from free university income — money that would otherwise be available for the support of teaching — Chicago, for example, devotes annually $30,260 to Graduate School fellowships and scholarships; Columbia, $12,600; Cornell, $13,200; Illinois, $16,300; Johns Hopkins, $16,750; Wisconsin, $9,550; Yale, $6,000. In connection with these amounts should be considered the sums involved in remission of tuition fees. Thus, at the Catholic University of America, remission is made in a number of specified cases, and also, at the discretion of the Rector, to "students of narrow means who attain high degrees of merit at the annual examination." Chicago gives scholarships equivalent to the tuition fee to officers of the University, and also to wives of officers, and grants free tuition to teachers in affiliated schools. Further, it is known that at one or more Graduate Schools where no catalogue announcement to the effect is made, remission of fees is very extensively practised. That is, not merely is there presented a most noteworthy educational phenomenon in the visible tendency to make a Graduate School a salaried body; but there is coming about a remarkable contrast in financial results between the Harvard policy of full tuition fees, no remission of charges, and small scholarship aid from the general fund, and the practices and policies prevalent in a majority of other Graduate Schools. Thus, in 1906–07, the latest year for which the figures of both Schools are at hand, tuition charges in the Yale Graduate School, with three hundred and fifty-seven students catalogued, were $13,732.27; of this sum, $3,164 was remitted. Administration and office expenses amounted to $4,368.52. University fellowships and scholarships required $6,431; taking no account, of course, of endowed fellowships and scholarships. These sums, when balanced, show that, so far from contributing to the expenses of teaching, the School involved Yale University in a net expenditure of $231.25, entirely exclusive of cost of instruction. In the Harvard Graduate School of Arts and Sciences, for the same year, all expenses for administration, office work, printing, postage, stationery, etc., were more

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than covered by graduation fees and fees for "additional" courses; tuition receipts, as noted above, were $46,285; payments for University scholarships were $1,890. The free balance applicable to teachers' salaries was thus about $44,500: an amount sufficient to pay six professors, six assistant professors, and six instructors; a larger sum than was devoted to teachers' salaries in the Law School in any year previous to 1898–99; or, to use another illustration, a sum sufficient to pay the salaries of the President of the University, the Regent, Registrar, Treasurer, and Steward, and all the professors, tutors, instructors, and proctors in the Academic Department of the University for the year 1863–64.

The Administrative Board at its meeting of June 16, 1908, voted "to recommend to the Faculty the abolition of the practice of granting the degree of Master of Arts to students of the Law School on purely professional work." The disappearance of these A.M.'s in law will mark the closing of an extremely troublesome series of problems arising from the defective early organization of the School. With undergraduate degrees no longer given in the School;* with the Master's degree no longer granted on the basis of work done by students while enrolled as undergraduates in Harvard College;† with at least the beginning of a development of the entity of the School through the initiation of Graduate dormitories;‡ and finally with the anomalous relation of the Master's degree to undergraduate professional students working wholly under other Faculties in process of extinction,§ we may now feel that our title of "Graduate School of Arts and Sciences" no longer legitimately exposes the School to a comment similar to that made by Voltaire upon a certain institution of his time, that it was neither holy, nor Roman, nor an empire.

These vexatious and pressing problems of the past may, then, be looked upon as solved, or in course of solution. There are, however, certain other problems which require attention if the School is to fulfil the hopes and the reasonable expectations of its alumni and of the world of learning. A few words in regard to them may not be amiss.

In the first place, the slow increase in numbers has led some of our friends to fear the competition of other institutions. This fear

* Report, 1896–97, p. 150; 1898–99, pp. 157f.; 1902–03, p. 151.
† Report, 1902–03, p. 152; 1903–04, pp. 93, 165.
‡ Report, 1905–06, pp. 131f.; 1906–07, pp. 142f.
§ Report, 1891–92, p. 104; 1905–06, p.155; 1906–07, p. 127.

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is groundless, in so far that the issue of development or retrogression is still wholly in our own hands. Such are our advantages in teachers, libraries, laboratories and collections, reputation of alumni, and location, that our future history, even as concerns numerical growth, cannot be determined, or even, unless we permit, very greatly influenced, by any other graduate schools now in existence, whatever their wealth or strength. The questions that need consideration are, instead, internal, and concern, first, the efficiency of our teaching force; secondly, the material organization and equipment of the School; and thirdly, the possibility of access to our advantages on the part of good students. And the answer to each of these questions is, in the last analysis, the same: — increased endowments; greater resources; in a word, more money.

It is plain that for the best results, and for the maintenance of an institution of the highest rank, the teacher should be free, and should be expected, to devote unhampered his strength and working time to the duties appropriate to his position, which, in the case of a university instructor, are actual teaching, whether in the class-room or in the individual guidance of advanced students, and productive research. Such a rule of freedom has hitherto been rendered impossible by the whole course of the organization and development of the School: which was formed with no capital save a college curriculum to which the elective system was beginning to lend elasticity,* and such use of buildings and collections as might be lent by the College; which has never received in specific gifts, apart from funds for travelling fellowships, money enough to endow a single professorship; and of which the progress has been dependent upon tuition fees, the frugal help possible from a Corporation often confronted by an adverse balance-sheet, and the strength of teachers charged in many cases with duties of undergraduate administration. It is not conceivable that these conditions shall be permitted to remain permanent. Increased endowment for teaching; larger salaries for professors, particularly during the earlier and determinative years of the professorship; reorganization that shall free University teachers from College administrative work; all these are vital, and must be supplied before the School can be considered as established on a sound foundation, or the results of its work can be in any way proportionate to its possibilities.

* "*Instruction open to Graduates.* — All the elective courses of study in Harvard College are open to Bachelors of Arts of any college, on the payment of certain fees." *University Catalogue*, 1878–74, p. 159. These College courses were the *only* ones offered to Graduates.

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The second group of questions relates to material organization and equipment. This should be kept duly subordinate, that we may not repeat the common American mistake of putting bricks and mortar before men in the development of a university; but it cannot be postponed. We already have the beginning of a system of Graduate dormitories; but these are even now inadequate, and provision should be made for an increase to meet not only present but future needs.

The most annoying and insistent problem of the School at the present time is that of lodging the married students. The change in housing conditions in Cambridge during the past few years has made it practically impossible to obtain respectable and comfortable quarters for married students, at moderate prices, and within a reasonable distance of the University. There is an immediate need of a large dormitory or apartment house for these students and their families, conveniently located, and specially arranged and fitted for their wants. Such a building should contain a large number of small housekeeping apartments, each with a kitchenette and a bath, at an average rental of twenty-two to twenty-five dollars a month, including heat, with provision for a sewing-room, children's recreation room, laundries, storage, and other appropriate conveniences.

Thirdly, we need to consider how it may be more practicable for the best Graduate students throughout the country to come to the School. I shall be the last to encourage the subsidizing of students of only ordinary ability, or of professional fellowship-hunters, who, I am told, exist; but I believe it will be a perversion of our sacred trust, if we fail to do all that lies in our power to make access to our privileges possible on the part of those men of strength and promise whose nurture is the chief glory of a university. This means, in a word, that we must have a large addition to our scholarship funds. As I have said in a former Report,* the supply of fellowships, both for resident and for non-resident study, is adequate, and is likely to increase at a rate fairly commensurate with the needs of the School. To repeat what I stated then, "The present and pressing want of the School is a very large addition to the provision of scholarships, and particularly of small scholarships. A comparatively slight margin of expense annually turns from us to other institutions a large number of Graduate students of marked ability and most earnest purpose, whose connection with Harvard would be highly creditable and advantageous to the University." An alumnus has suggested that it may be feasible to secure the establishment of

* 1906–07, p. 155.

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additional Graduate scholarships by the various Harvard clubs, the scholarships to be open to competitors from the institutions in the state of the club which supplies the money, somewhat after the plan of the Rhodes scholarships. It is well to remember that every gift of money for a scholarship serves a double purpose: it brings a good man to Harvard, and, being used in payment of tuition, it helps to meet the expenses of instruction.

These are the problems of the School that urgently demand consideration. That the solution will be worthy of the University, and even beyond what it is now possible to foretell or imagine, the experience of the past forbids us to doubt. President Thomas Hill said, forty years ago, "It is more important to the country to have a university professor giving the highest instruction and highest known science to two or three young men of ability and industry, than that classes of a thousand should be studying in ordinary text-books." What would he have thought, to whom even the two or three were visible only by the eye of hope, had he been able to foresee the development of graduate instruction that was to come within the space of a single University administration?

The twelfth annual reception of the School was held in the Faculty Room on Thursday evening, October 8, 1908, with an attendance of two hundred and forty. The principal address was by James Ford Rhodes, LL.D., on "President Hayes's Administration." Briefer addresses were made by the President of the University, and by Dean Edwin F. Gay of the Graduate School of Business Administration. These were followed by a reception.

GEORGE W. ROBINSON, *Secretary.*

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# THE GRADUATE SCHOOL OF APPLIED SCIENCE

To the President of the University: —

Sir, — I have the honor to submit to you the following report on the Lawrence Scientific School and the Graduate School of Applied Science for the academic year 1907–08.

In consequence of the continued policy of developing the Graduate School of Applied Science by encouraging the students of the Scientific School to transfer to Harvard College, the enrolment in the undergraduate department continued to decrease. The enrolment and distribution of students in the Lawrence Scientific School at the time of the issue of the Annual Catalogue are shown in the following tables: —

REGISTRATION BY CLASSES IN THE LAWRENCE SCIENTIFIC SCHOOL

| Class. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|
| Fifth-Year | 6 | 0 | 0 |
| Fourth-Year | 63 | 56 | 26 |
| Third-Year | 73 | 35 | 23 |
| Second-Year | 131 | 68 | 25 |
| First-Year | 95 | 45 | 22 |
| Specials | 136 | 0 | 0 |
| Totals | 504 | 204 | 96 |

DISTRIBUTION OF REGULAR STUDENTS IN THE FOUR-YEAR PROGRAMMES IN THE LAWRENCE SCIENTIFIC SCHOOL

| Programme. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|
| Civil Engineering | 39 | 34 | 24 |
| Mechanical Engineering | 51 | 37 | 16 |
| Electrical Engineering | 66 | 42 | 30 |
| Mining and Metallurgy | 49 | 20 | 6 |
| Architecture | 29 | 15 | 6 |
| Landscape Architecture | 9 | 6 | 2 |
| Forestry | 8 | 8 | 4 |
| Chemistry | 19 | 11 | 4 |
| Geology | 2 | 3 | 1 |
| Biology | 2 | 1 | 0 |
| Anatomy and Physiology | 18 | 9 | 3 |
| Teachers of Science | 13 | 12 | 0 |
| General Science | 63 | 6 | 0 |
| Totals | 368 | 204 | 96 |



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The enrolment and distribution of students in the Graduate School of Applied Science are shown in the following table: —

ENROLMENT IN THE GRADUATE SCHOOL OF APPLIED SCIENCE

| Programme. | 1906-07. | 1907-08. |
|---|---|---|
| Civil Engineering | 7 | 11 |
| Mechanical Engineering | 0 | 4 |
| Electrical Engineering | 2 | 7 |
| Mining and Metallurgy | 3 | 12 |
| Architecture | 7 | 12 |
| Landscape Architecture | 4 | 7 |
| Forestry | 5 | 7 |
| Applied Physics | 0 | 1 |
| Applied Chemistry | 1 | 1 |
| Applied Zoölogy | 0 | 0 |
| Applied Geology | 0 | 0 |
| Biology | 0 | 1 |
| Totals | 29 | 63 |

This reorganization and transfer of students having been in great measure accomplished without apparent loss in registration in the University, the Corporation and Overseers in October passed a final vote closing the undergraduate scientific school to the further admission of students. The four-year programmes leading to the degree of Bachelor of Science in designated fields are nevertheless continued for students still enrolled in the Scientific School and for students enrolled in Harvard College at the time of the vote who may desire at any time to be transferred.

The gift to the University in the fall of 1907 of about two thousand acres of timber land placed the Division of Forestry in point of equipment in the front rank of the schools of forestry. This land was offered to the University by Mr. James W. Brooks, a resident of Petersham, at a price much below its estimated selling value. The necessary money for its purchase, fifty-five thousand dollars, was given by Mr. John S. Ames of Boston, who, in addition, gave five thousand dollars for the equipment and repair of buildings. To the main tract of land thus secured, the owners of neighboring land, Messrs. Edwin C. Dexter, Joseph C. Smith, Henry S. Bennett, Charles S. Waldo, William Simes, J. J. Higginson, and James W. Brooks, gave outright adjoining lots amounting to between two hundred and three hundred acres, filling out the main tract and affording access to it and thus greatly increasing its value. The forest reserve thus created comprises what is probably the best body of timber now to be found on an equal area in Massachusetts. About half the forest is of white pine in excellent condition. The

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other half is of various types of hardwood growth, younger clumps of pine and some open ground. The reserve includes three miles of the Swift River Valley, the basins of two ponds, and the slopes of Prospect Hill. Fifteen miles of excellent wood roads provide access to all parts. Several buildings, one of them a dormitory built for a religious community, afford lodging for students, instructors, and the managing force. The greatest advantage of these forests from the standpoint of instruction lies in the arrangement of age-groups or generations of timber. The stands of timber are of various ages from the small sapling to the mature tree. An approach to continuous yield can be secured without cutting more than a small portion of the whole area in any one year, and gradually the forest can be so organized as to offer an increasingly valuable demonstration of practical and scientific management.

During the year the reorganization of the Bussey Institution was under almost continuous discussion. In March the Corporation and Overseers voted to transform it from an undergraduate school of agriculture into an institution for advanced instruction and research in the scientific problems that relate and contribute to practical agriculture and horticulture. It thus became one of the component parts of the Graduate School of Applied Science. The four fields of work chosen for immediate development were Economic Entomology, Animal Heredity, Experimental Plant Morphology, and Comparative Pathology. The needs of the community infested by gypsy and brown-tail moths and the elm tree beetle forced economic entomology to the front place in the reorganized institution, notwithstanding the fact that to establish it would call for an entirely new chair in the University. Professor William Morton Wheeler was called from the Natural History Museum in New York to take charge of this work. The expenses of this one department so nearly consumed the income of the endowment of the Bussey Institution that in order to establish the other department it was necessary to raise additional funds. At the close of the academic year 1907–08 no considerable headway in this had been made.

The Division of Forestry in planning its work for the ensuing year found it wise to divide its year into three terms instead of into the customary semesters. The programme finally decided on called for spending October and November at Petersham, December, January, February, and March in Cambridge, and April, May, and June in Petersham. This division of the year permits of the most efficient use of the forest reserve at Petersham and of the facilities of Cambridge, and is rendered possible by the fact that, being a strictly

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graduate school, its students are not involved in the undergraduate courses demanding continuous residence in Cambridge. Similarly, in planning the work in economic entomology, it is apparent that the part of the year offering greatest field resources, and therefore the best part for instruction, does not coincide with the academic year. It has therefore been suggested that the year for instruction shall run from the first of February to the first of November. These are but illustrations, though perhaps extreme illustrations, of the advantages which the School is finding in its freedom from undergraduate courses. Not merely will it be possible to alter the distribution of work within the academic year from the semester arrangement, and perhaps even to depart from the conventional academic year, but it will be possible also to arrange the work in amounts which correspond to the demands of the several subjects rather than to the course and the half-course basis. The latter division of courses into whole and half courses is necessitated by a system of equivalents in varied undergraduate programmes, but is not necessary in a graduate school conducted on the departmental basis. The exemption from this restriction may prove an important freedom.

In June a gift was received from the Harvard Engineering Society of New York of six hundred dollars to be used as a loan fund for students in Harvard University, whether graduate or undergraduate, looking forward to professional work in Civil, Mechanical, and Electrical Engineering, or in Mining and Metallurgy, and wishing to pursue courses in some one of the Harvard summer schools. The summer loan fund thus established is especially valuable inasmuch as students making their way through college find summer courses both an extra expense and an interference with financially profitable work in a season on which they are accustomed to rely for the meeting of the expenses of the academic year. The fund was received too late to make an effective announcement of its existence, nevertheless two hundred dollars were loaned for the summer of 1908.

WALLACE C. SABINE, *Dean*.

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# THE GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

To the President of the University:—

Sir, — I have the honor to submit a brief report on the Graduate School of Business Administration which was established by vote of the Corporation on March 30, 1908. Its first announcement, containing the programme of instruction for the academic year 1908–09, was issued in August, 1908.

The courses of instruction are arranged in eight groups: Accounting, Commercial Law, Economic Resources, Industrial Organization, Banking and Finance, Transportation, Insurance, and Public Business. All students regularly admitted as candidates for the degree are ordinarily required in the first year to take the introductory course in each of the first three groups, — Principles of Accounting, (Economics 18), Commercial Contracts (Business 5), Economic Resources (Business 10). Freedom of election is provided for one or two additional courses in the first year and for all the courses of the second year.

In the courses on Commercial Law the case-system is used. In the other courses an analogous method, emphasizing class-room discussion in connection with lectures and frequent reports on assigned topics, is being introduced as far as practicable. Visits of inspection are made under competent guidance to various commercial and transportation establishments. Similar field work of a more specialized character will form a feature of the advanced work of the second year.

Instruction in the School is given both by men who devote their entire time to the work of teaching, and, in those courses which peculiarly require the knowledge derived from actual experience in modern methods, by business or professional men. A large number of special lectures are also given during the year by experts who lecture on the latest developments in their specialties.

The following list of courses contains only those which are given in the first year of the School. Additional courses designed particularly for second-year students will be given in 1909–10 and thereafter.



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## INSTRUCTORS AND COURSES GIVEN IN 1908–09

EDWIN FRANCIS GAY, Ph.D., *Dean*, and *Professor of Economics*.

### I. ACCOUNTING

WILLIAM MORSE COLE, A.M., *Assistant Professor of Accounting*.
Economics 18. Principles of Accounting.
Business 1. Accounting Practice.

### II. COMMERCIAL LAW

LINCOLN FREDERICK SCHAUB, A.M., LL.B., *Instructor in Commercial Law*, and *Secretary of the Graduate School of Business Administration*.
Business 5. Commercial Contracts.

### III. ECONOMIC RESOURCES

PAUL TERRY CHERINGTON, S.B., A.M., *Instructor in Economic Resources*.
Business 10. Economic Resources of the United States.
Business 11 ²*hf*. Commercial Organization and Methods.

PAYSON JACKSON TREAT, A.M., *Instructor in Government*.
Business 13 ²*hf*. Economic Resources of Eastern Asia and Australasia.

WESLEY CLAIR MITCHELL, Ph.D. (Assistant Professor of Commerce in the University of California), *Lecturer on Economics*.
Business 15 ²*hf*. Industrial Values.

### IV. INDUSTRIAL ORGANIZATION

Professor GAY, Messrs. J. N. GUNN, A. C. HUMPHREYS, F. W. TAYLOR, C. G. L. BARTH, H. F. J. PORTER, J. O. FAGAN, H. E. DAVIDSON, E. J. BLISS, R. ROBB, and J. E. STERRETT.
Business 17 ²*hf*. Industrial Organization.

### V. BANKING AND FINANCE

OLIVER MITCHELL WENTWORTH SPRAGUE, Ph.D., *Assistant Professor of Banking and Finance*.
Business 21. Banking.
Business 22 ²*hf*. Foreign Exchange.

JOHN FARWELL MOORS, A.M., *Lecturer on Investment*.
Business 24 ²*hf*. Investment.

Professor E. S. MEADE (University of Pennsylvania), Messrs. C. M. HOUGH, F. P. FISH, G. W. WICKERSHAM, G. O. MAY, W. B. DONHAM, F. A. CLEVELAND, J. J. STORROW, J. F. HILL, W. J. FILBERT, J. F. JACKSON, H. K. SMITH, F. E. SNOW, R. F. HERRICK, C. C. BURLINGHAM, T. W. LAMONT, and A. H. JOLINE.
Business 25 ¹*hf*. Corporation Finance.

### VI. TRANSPORTATION

STUART DAGGETT, Ph.D., *Instructor in Transportation*.
Business 27 ¹*hf*. Railroad Organization and Finance.
Business 30 ²*hf*. Railroad Accounting.

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WILLIAM JAMES CUNNINGHAM, *Lecturer on Railroad Operation.*
Business 28. Railroad Operation.

EDGAR JUDSON RICH, A.M., LL.B., *Lecturer on the Theory and Practice of Rate Making.*
Business 29. The Railroad and the Shipper: The Theory and Practice of Rate Making, with Especial Reference to the Interstate Commerce Act.

### VII. INSURANCE

WILLIAM BLISS MEDLICOTT, B.S., *Lecturer on Insurance.*
Business 32*a* $^{1}$*hf.* Fire Insurance.

HERBERT BEEMAN DOW, A.M., *Lecturer on Insurance.*
Business 32*b* $^{2}$*hf.* Life Insurance.

### VIII. PUBLIC BUSINESS

JOHN WELLS FARLEY, A.B., LL.B., *Lecturer on Municipal Administration.*
Business 38 $^{2}$*hf.* The Administration of Municipal Business.

In close connection with the Business courses the following courses in German, French, and Spanish Correspondence, of a distinctly practical type, are being given to students in the School: —

ERNST HERMANN PAUL GROSSMANN, A.B., *Instructor in German Correspondence.*
German *L hf.* German Correspondence.

LOUIS ALLARD, Agrégé-des-lettres, *Instructor in French Correspondence.*
French 18 *hf.* French Correspondence.

EVARISTO HURTADO, D.D., *Instructor in Spanish Correspondence.*
Spanish 18 *hf.* Spanish Correspondence.

EDWIN F. GAY, *Dean.*

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# THE DIVINITY SCHOOL

To the President of the University: —

Sir, — As Dean of the Divinity School I have the honor to present the following report for the year 1907–08.

The hope expressed in my last annual report that the negotiations between the University and Andover Theological Seminary might reach a successful issue has been fulfilled during the past year by the perfecting of an arrangement satisfactory to both parties in accordance with which the Trustees of Andover voted to remove the Seminary to Cambridge and affiliate it with Harvard University. This action has not been taken without grave apprehensions on both sides, but it is confidently believed that mutual good-will and devotion to a common end will carry us safely through inevitable perplexities and difficulties, and that the result of the affiliation will be the building up here of so ample and symmetrical a body of theological instruction that Cambridge will become the natural resort of candidates for the ministry seeking the most thorough preparation for their work by the free pursuit of theological studies aided by the resources of a great university and the opportunities of a large city. Our students should profit largely by the coming of Andover, especially after the filling of its now vacant professorships, for it must be acknowledged that at present our curriculum is somewhat deficient on the technical side. We have now three professors and one assistant in the department of Semitics, but no one giving his full time to the department of Homiletics and Pastoral Care. Not that less importance should be given to the academic preparation for the ministry, but that more attention should be paid to the conditions of practical efficiency. The advance should not fall back to the line, but the line should be dressed up to the advance.

The deficiency in our present curriculum, to which reference has been made, was partially made good last year by a course of ten lectures on "Church Hymnody," provided by the generosity of Mr. Horace S. Sears, and delivered by the Rev. F. L. Hosmer, D.D., of Berkeley, California. These lectures were of great value and were well attended, notwithstanding the recognized fact that, owing to the demands of the work required for a degree, students are reluctant to attend regularly courses of lectures, however important, which do not "count." It would be of substantial benefit to have



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a three years' cycle of courses in Liturgics (including Church Music and Hymnody), Religious Education, and Social Problems as related to the work of the Ministry, given by especially qualified instructors not of our own Faculty. In the course last mentioned particular attention should be paid to the problems and opportunities of a country minister. It is to be feared that the almost exclusive attention given in theological schools to the work of the city minister leaves the students unprepared for the tasks of a country parish and uninterested in its opportunities, and that, in consequence, country parishes are supplied with men who, having no enlightened enthusiasm for this particular kind of work, are eager to remove to a city at the first opportunity. Yet the country parish has challenging problems not inferior to those of the city, and its service is no less highly rewarding. Inasmuch as nearly every minister must begin his career in a country parish, it is only just, both to him and to the church, that he should have training also for its specific work.

Besides the lectures on "Hymnody," we had the privilege also of a course of six lectures on "History of the German Philosophy of Religion," given by Dr. Otto Pfleiderer, of Berlin. These lectures also were well attended and highly appreciated.

In addition to the regular and immediate service of the School, our Faculty has also been of wider and more public service during the past year in four directions. (1) By the kindness of the Trustee of the Lowell Institute we were invited to give, under the auspices of the Institute, a course of Monday afternoon lectures in King's Chapel upon "Current Problems in Theology." These lectures were perhaps even better attended than those of a similar course the year before, and the interest manifested seemed fully to justify the labor expended.

(2) As a result of the relation recently established between our School and King's Chapel, members of our Faculty were invited by the Rev. Howard N. Brown to conduct the Sunday afternoon services in the Chapel during the winter, and the invitation was cordially accepted as a most honorable privilege.

(3) The first number of the *Harvard Theological Review* appeared in January, 1908. This *Review* is partially endowed by the bequest of Miss Mildred Everett in fulfilment of the wish of her father, the late Dr. C. C. Everett, former Dean of the School, and is conducted by a Committee of the Faculty consisting of Professors G. F. Moore, Fenn, and Ropes. The *Review* has now a paid circulation of 800 copies, and its quarterly issues have contained articles of exceptional theological significance.

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(4) The Summer School was quite as encouraging this year as last. On account of the more academic character of the subjects treated the attendance was smaller than at the preceding session when sociological topics were presented, but the enthusiastic appreciation of the students showed no diminution. Although the work of the Summer School courses entails heavy burdens upon members of our Faculty, the public service rendered seems to warrant the additional labor.

The ten sessions of the School have had the following record of attendance: —

| | Men. | Women. | Total. |
|---|---|---|---|
| 1899 | 96 | 9 | 105 |
| 1900 | 52 | 2 | 54 |
| 1901 | 84 | 5 | 89 |
| 1902 | 74 | 4 | 78 |
| 1903 | 54 | 4 | 58 |
| 1904 | 46 | 1 | 47 |
| 1905 | 54 | 7 | 61 |
| 1906 | 59 | 9 | 68 |
| 1907 | 92 | 11 | 103 |
| 1908 | 61 | 5 | 66 |
| | 672 | 57 | 729 |

The distribution by denomination, in the case of ministers attending in the ten years, was as follows: —

| | Orthodox Congregational. | Unitarian Congregational. | Episcopalian. | Universalist. | Baptist. | Presbyterian. | Disciples. | Methodist. | Free Baptist. | Lutheran. | Christian Connection. | German Reformed. | Moravian. | Evangelical Association. | Dutch Reformed. | Jewish. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1899 | 27 | 17 | 16 | 14 | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 1900 | 17 | 6 | 3 | 14 | 6 | .. | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | .. |
| 1901 | 28 | 12 | 11 | 14 | 5 | 2 | .. | 10 | 1 | 1 | .. | .. | .. | .. | .. | .. |
| 1902 | 28 | 7 | 15 | 3 | 5 | 1 | 1 | 8 | 1 | 1 | .. | .. | .. | .. | .. | .. |
| 1903 | 21 | 4 | 10 | 5 | .. | 5 | 3 | 1 | 1 | .. | 1 | 1 | 1 | .. | .. | .. |
| 1904 | 13 | 6 | 11 | 1 | 7 | 1 | .. | 3 | 1 | .. | 1 | .. | .. | 1 | .. | .. |
| 1905 | 7 | 4 | 14 | 3 | 5 | 1 | 5 | 9 | .. | .. | 1 | 3 | .. | .. | 1 | .. |
| 1906 | 8 | 7 | 16 | 2 | 3 | 3 | 2 | 5 | .. | 1 | .. | 5 | .. | .. | .. | 1 |
| 1907 | 13 | 12 | 17 | 9 | 5 | 5 | 3 | 15 | .. | 3 | .. | 2 | .. | .. | .. | .. |
| 1908 | 12 | 6 | 17 | 1 | 3 | 2 | 4 | 6 | .. | 1 | 1 | 3 | .. | .. | 1 | .. |
| | 174 | 81 | 130 | 66 | 44 | 23 | 21 | 60 | 4 | 7 | 4 | 14 | 1 | 1 | 2 | 1 |

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During the past year 35 students were enrolled in the regular School, of whom 4 entered at the beginning of the second half-year. The distribution was as follows: —

| | |
|---|---|
| Resident Graduates | 7 |
| Senior Class | 12 |
| Middle Class | 4 |
| Junior Class | 8 |
| Special Students | 4 |
| Total | 35 |

Twenty-six colleges were represented as follows: —

| | | | |
|---|---|---|---|
| Amherst College | 1 | Mass. Institute of Technology | 1 |
| Beloit College | 1 | Middlebury College | 1 |
| Boston University | 1 | University of Minnesota | 1 |
| Brown University | 1 | University of North Carolina | 2 |
| University of Buffalo | 1 | Oberlin College | 1 |
| University of Cambridge, Eng. | 1 | Leland Stanford Jr. University | 1 |
| Central College | 1 | Union College, Ky. | 1 |
| College of Charleston | 1 | Vanderbilt University | 1 |
| University of Chicago | 2 | University of Vermont | 1 |
| Clark College | 1 | Wabash College | 1 |
| Columbia University | 1 | Wheaton College | 1 |
| Dartmouth College | 2 | | 39 |
| De Pauw University | 1 | Counted more than once | 5 |
| Harvard University | 10 | | 34 |
| Kentucky University | 2 | | |

Ten theological seminaries were represented as follows: —

| | |
|---|---|
| Bangor Theological Seminary | 2 |
| Bethel Seminary, Sweden | 1 |
| College of the Bible, Ky. | 1 |
| Boston University | 1 |
| University of Chicago | 1 |
| Concordia Theological Seminary | 1 |
| Episcopal Theological School, Cambridge | 1 |
| Harvard University | 2 |
| Newton Theological Institution | 1 |
| Union Theological Seminary | 1 |
| | 12 |
| Counted more than once | 2 |
| | 10 |

The interchange of instruction between the Faculty of the School and the Faculty of Arts and Sciences indicates the extent of the contribution made by the Divinity School to the general work of the University. This interchange between the two Faculties in 1907–08 was as follows: —

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Divinity students taking courses offered by the Faculty of Arts and Sciences, 1907–08: —

| | |
|---|---|
| Semitic | 1 election. |
| Greek | 1 " |
| Classical Philology | 1 " |
| English | 3 elections. |
| German | 2 " |
| French | 1 " |
| History | 3 " |
| Economics | 6 " |
| Philosophy | 19 " |
| Social Ethics | 2 " |
| | 39 |

Non-Divinity students electing courses offered primarily by the Divinity School, 1907–08: —

| | |
|---|---|
| Old Testament | 23 elections. |
| New Testament | 8 " |
| Church History | 53 " |
| History of Religions | 65 " |
| Theology | 10 " |
| Ethics | 108 " |
| | 267 " |

Twelve members of the School received the degree of S.T.B. (three, cum laude), four the degree of A.M., and one the degree of Ph.D.

The following is a list of the Courses of Instruction offered in the School in the year 1907–08. With each course is a statement of the number of students electing it from the Divinity School, the Graduate School of Arts and Sciences, Harvard College, and Radcliffe College. A list of the lectures of the Summer School and a list of the lectures delivered by the Faculty in the Lowell Institute course in King's Chapel are appended to the list of regular courses.

## COURSES OF INSTRUCTION

### OLD TESTAMENT

1. Mr. Davey. — Hebrew. Morphology. Explanation of parts of Genesis and of the Book of Psalms. 2 Div., 7 Col.

2. Professor Toy. — Hebrew (second course). — Syntax. Interpretation of parts of the Prophets and the Poetical Books. Text-criticism. As full course, 1 Col. As half-course, 1 Div.

3 ²*hf*. Mr. Davey. — Jewish Aramaic. Interpretation of parts of Ezra, Daniel, and the Targums. *Half-course*. 1 Col.

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11 ¹*hf.* Mr. DAVEY. — Classical Aramaic (Syriac). *Half-course.* 1 Col.

4. Professor LYON. — History of Israel, political and social, till the capture of Jerusalem by the Romans. 4 Div., 9 Col.

6. Professor TOY. — History of the Hebrew Religion, with comparison of other Semitic religions. As full course, 9 Div., 2 Col. As half-course, 1 Div.

7. Professor LYON and Mr. DAVEY. — Assyrian. 1 Col.

8. Professor LYON. — Assyrian (second course). 1 Col.

20. Research courses. The instructors arrange and supervise for any properly prepared student a line of special study on such topic as may be agreed on. 1 Div.

## NEW TESTAMENT

2 ¹*hf.* Professor ROPES. — Introduction to the Study of the New Testament. The origin and early history of the New Testament writings. *Half-course.* 3 Div., 5 Col.

3 ¹*hf.* Professor ROPES. — The Gospel of Mark. *Half-course.* 7 Div., 2 Rad.

9 ¹*hf.* Professor ROPES. — The Epistle to the Hebrews and the First Epistle of Clement of Rome. *Half-course.* 3 Div., 1 Rad.

15 ¹*hf.* Professor FENN. — The Theological Method of Jesus and Paul. *Half-course.* 9 Div.

## CHURCH HISTORY

1. Professor EMERTON. — The First Eight Christian Centuries. — The Conflict of Christianity with Paganism. Origin and Development of the Roman Papacy to its alliance with the Frankish State. The Germanic races as the basis of a new Christian civilization. 14 Div., 4 Gr., 13 Col.

3. Professor EMERTON. — The Era of the Reformation in Europe, from the rise of Italian Humanism to the close of the Council of Trent (1350 to 1563). 7 Div., 9 Gr., 5 Col.

4. Professor E. C. MOORE. — The Church since the Reformation. As full course, 6 Div., 22 Col. As half-course, 3 Div.

6. Professor EMERTON. — Practice in the Study and Use of Materials for Church History. 1 Div.

## HISTORY OF RELIGIONS

2. Professor G. F. MOORE. — History of Religions in Outline. As full course, 5 Div., 4 Gr., 61 Col. As half-course, 6 Div.

20. Professor G. F. MOORE. — Research course. 1 Div.

## THEOLOGY

1 ¹*hf.* Professor FENN. — Theism. *Half-course.* 6 Div., 1 Gr., 2 Col.

2 ²*hf.* Professor FENN. — Outlines of Systematic Theology. *Half-course.* 8 Div., 1 Gr.

3 ²*hf.* Professor FENN. — New England Theology. *Half-course.* 12 Div.

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6. Professor E. C. Moore. — The History of Christian Thought since Kant, including a discussion of the present state and tendencies of theological thought. 10 Div., 2 Gr., 5 Col.

8 1*hf*. Professor Fenn. — Current Problems in Theology. *Half-course*. 7 Div.

20 2*hf*. Professor E. C. Moore. — Modern Theology, especially as influenced by Ritschl. The modification of Ritschl's contentions. Constructive work in Theology during the last fifteen years in Germany, England, and America. Lectures, readings, and reports. *Half-course*. 12 Div.

## ETHICS

1. Professor Peabody and Dr. Rogers. — Social Ethics. — The Problems of Poor Relief, the Family, Temperance, and various phases of the Labor Question, in the light of ethical theory. — Lectures, special researches, and prescribed reading. 3 Div., 3 Gr., 102 Col.

20*b*. Professor Peabody. — The instructor directs special researches of competent students in the Ethics of the Social Questions. 3 Div., 2 Gr., 1 Col.

## HOMILETICS AND PASTORAL CARE

1 1*hf*. Professor Peabody. — Introduction to Preaching and the Conduct of Worship. *Half-course*. 3 Div.

2. Professors Peabody, E. C. Moore, and Fenn. — Preaching. As full course, 9 Div. As half-course, 6 Div.

## ELOCUTION

1. Mr. Willard. — Voice Training and the Elements of Form in Speaking. Preparatory to Course 2. (Not counted for a degree.) 8 Div.

2 *hf*. Asst. Professor Winter and Mr. Willard. — Sermon Delivery, Scripture Reading, Oral Discussion. *Half-course*. 8 Div.

# SUMMER SCHOOL OF THEOLOGY

Professor C. H. Toy. — Five lectures: The Origin and Development of Religion.

Professor R. W. Rogers. — Five lectures: The Religion of Babylonia and Assyria.

Professor E. W. Hopkins. — Three lectures: Zoroastrianism.

Professor C. R. Lanman. — Five lectures: Buddhism.

Professor W. R. Arnold. — Five lectures: Judaism from Alexander to the Antonines.

Professor C. C. Torrey. — Five lectures: Mohammedanism.

Professor C. H. Moore. — Six lectures: The Religions of the Roman World at the Beginning of the Christian Era.

Professor W. W. Rockwell. — Three lectures: The Attitude of the Early Church toward Other Religions.

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Dr. A. S. Lloyd. — Three lectures: The Attitude of the Modern Church toward Other Religions.

Professor G. F. Moore. — Five lectures: The Influence of Other Religions on Christianity.

## KING'S CHAPEL LECTURES

Professor D. G. Lyon. — Three lectures: Recent Discoveries in Palestine.

Professor C. H. Toy. — Three lectures: The Formation of the Hebrew Psalter.

Professor E. C. Moore. — Two lectures: The Naturalization of Christianity in the Far East.

Professor G. F. Moore. — Two lectures: The Origin of Religion.

Professor W. W. Fenn. — Two lectures: The Nature of Revelation.

Professor E. Emerton. — Four lectures: Early Reformation Thought.

The following is a report of the Divinity Library for the year from August 1, 1907, through July 31, 1908. There were added to the Library 380 volumes and 30 pamphlets by purchase, 243 volumes and 1077 pamphlets by gift. August 1, 1908, there were in the Library 36,956 volumes and 10,351 pamphlets. During the year 913 titles were catalogued in the author catalogue and 190 titles in the subject catalogue. There were borrowed from the stack for home use 964 volumes, from the stack for hall use 1,308 volumes, from the reserved books for overnight use 684 volumes.

During the year the resignation was announced of Rev. R. S. Morison, who has been the Librarian of the School since 1889 and also Secretary of the Faculty since 1893. Mr. Morison's service has been of incalculable benefit to the School, and his resignation deprives the Faculty of a most efficient officer and the students of a wise and sincere friend. Fortunately, however, Mr. Morison as Librarian Emeritus will continue his work upon the Catalogue of the School, which his painstaking care has made a marvel of accuracy and completeness.

W. W. FENN, *Dean.*

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# THE LAW SCHOOL

To the President of the University: —

Sir, — I have the honor of presenting my report upon the Law School for the academic year 1907–08.

The table below exhibits the growth of the School during the last thirty-nine years, in the number of students, the number and

| Year. | Whole No. of Students. | Total of College Graduates. | Harvard Graduates. | Graduates of other Colleges. | Non-Graduates. | Per cent. of College Graduates. | No. of Colleges represented. |
|---|---|---|---|---|---|---|---|
| 1870–71 | 165 | 77 | 27 | 50 | 88 | 47 | 27 |
| 1871–72 | 138 | 70 | 34 | 36 | 68 | 51 | 25 |
| 1872–73 | 117 | 66 | 34 | 32 | 51 | 56 | 25 |
| 1873–74 | 141 | 86 | 49 | 37 | 55 | 61 | 25 |
| 1874–75 | 144 | 82 | 63 | 19 | 62 | 57 | 18 |
| 1875–76 | 173 | 93 | 60 | 33 | 80 | 54 | 25 |
| 1876–77 | 199 | 116 | 74 | 42 | 83 | 58 | 30 |
| 1877–78 | 196 | 121 | 80 | 41 | 75 | 62 | 30 |
| 1878–79 | 169 | 109 | 71 | 38 | 60 | 64 | 24 |
| 1879–80 | 177 | 118 | 90 | 28 | 59 | 66 | 20 |
| 1880–81 | 161 | 112 | 82 | 30 | 49 | 70 | 19 |
| 1881–82 | 161 | 99 | 66 | 33 | 62 | 61 | 22 |
| 1882–83 | 138 | 93 | 58 | 35 | 45 | 67 | 32 |
| 1883–84 | 150 | 105 | 75 | 30 | 45 | 70 | 25 |
| 1884–85 | 156 | 122 | 85 | 37 | 34 | 78 | 31 |
| 1885–86 | 158 | 122 | 83 | 39 | 36 | 77 | 29 |
| 1886–87 | 188 | 143 | 88 | 55 | 45 | 76 | 34 |
| 1887–88 | 225 | 158 | 102 | 56 | 67 | 70 | 32 |
| 1888–89 | 225 | 158 | 105 | 53 | 67 | 70 | 32 |
| 1889–90 | 262 | 189 | 122 | 67 | 73 | 72 | 41 |
| 1890–91 | 285 | 200 | 135 | 65 | 85 | 70 | 33 |
| 1891–92 | 370 | 257 | 140 | 117 | 113 | 69 | 48 |
| 1892–93 | 405 | 266 | 132 | 134 | 139 | 66 | 54 |
| 1893–94 | 367 | 279 | 129 | 150 | 88 | 76 | 56 |
| 1894–95 | 413 | 310 | 139 | 171 | 103 | 75 | 74 |
| 1895–96 | 475 | 380 | 171 | 209 | 95 | 80 | 82 |
| 1896–97 | 490 | 408 | 186 | 222 | 82 | 83 | 82 |
| 1897–98 | 551 | 490 | 229 | 261 | 61 | 89 | 77 |
| 1898–99 | 564 | 503 | 212 | 291 | 61 | 89 | 78 |
| 1899–00 | 613 | 557 | 236 | 321 | 56 | 91 | 67 |
| 1900–01 | 655 | 605 | 252 | 353 | 50 | 92 | 83 |
| 1901–02 | 633 | 584 | 247 | 337 | 49 | 92 | 92 |
| 1902–03 | 644 | 600 | 241 | 359 | 44 | 93 | 94 |
| 1903–04 | 743 | 695 | 272 | 423 | 48 | 94 | 111 |
| 1904–05 | 766 | 711 | 286 | 425 | 55* | 93 | 114 |
| 1905–06 | 727 | 716 | 295 | 421 | 11 | 98 | 118 |
| 1906–07 | 705 | 696 | 260 | 436 | 9 | 99 | 126 |
| 1907–08 | 719 | 712 | 276 | 436 | 7 | 99 | 122 |
| 1908–09 | 690 | 680 | 256 | 424 | 10 | 99 | 121 |

* 28 Harvard Seniors who have completed the full College course, but have not received their diplomas, are reckoned as graduates. Prior to 1905–06 Harvard Seniors were not reckoned as graduates but as non-graduates.



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| Instructors. | Studies and Text-books. | Exercises per week. | Number of students examined. |
|---|---|---|---|
| | **First Year** | | |
| Prof. Wambaugh | Agency. Wambaugh's Cases on Agency | 2 | 272 |
| Prof. Williston<br>Asst. Prof. Wyman | Contracts. Williston's Cases on Contracts | 3 | 288 |
| Asst. Prof. Warren | Property. Gray's Cases on Property, vols. 1, 2 | 2 | 285 |
| Prof. Smith | Torts. Cases on Torts: Ames, vol. 1 (2d ed.), Smith, vol. 2 | 2 | 294 |
| Prof. Beale | Criminal Law and Procedure. Beale's Cases on Criminal Law | 1½ | 288 |
| Prof. Ames | Civil Procedure at Common Law. Ames's Cases on Pleading | 1½ | 296 |
| | **Second Year** | | |
| Prof. Wambaugh | Agency. Wambaugh's Cases on Agency | 2 | 79 |
| Prof. Brannan | Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and the Negotiable Instruments Law | 2 | 20 |
| Prof. Gray | Evidence. Thayer's Cases on Evidence (2d ed.) | 2 | 210 |
| Prof. Beale | Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1 | 2 | 203 |
| Asst. Prof. Warren | Property. Gray's Cases on Property, vols. 3, 4 | 2 | 210 |
| Prof. Williston | Sales of Personal Property. Williston's Cases on Sales | 2 | 166 |
| Prof. Ames | Trusts. Ames's Cases on Trusts (2d ed.) | 2 | 196 |
| Mr. Dutch | Admiralty. Ames's Cases on Admiralty | 1 | 4 |
| Prof. Williston | Bankruptcy. Williston's Cases on Bankruptcy | 1 | 8 |
| Asst. Prof. Wyman | Carriers. Beale and Wyman's Cases on Public Service Companies | 1 | 20 |
| Prof. Beale | Damages. Beale's Cases on Damages | 1 | 15 |
| Prof. Ames | Persons. Smith's Cases on Persons | 1 | 4 |
| Mr. Schaub | Quasi-Contracts. Scott's Cases on Quasi-Contracts | 1 | 3 |

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## Third Year

| | | | |
|---|---|---|---|
| Prof. Beale | Conflict of Laws. Beale's Cases on the Conflict of Laws | 2 | 165 |
| Prof. Wambaugh | Constitutional Law. Thayer's Cases on Constitutional Law | 2 | 91 |
| Asst. Prof. Warren | Corporations. Smith's Cases on Private Corporations (2d ed.) | 2 | 180 |
| Prof. Brannan | Partnership. Ames's Cases on Partnership | 2 | 15 |
| Prof. Gray | Property. Gray's Cases on Property, vols. 5, 6 | 2 | 95 |
| Asst. Prof. Wyman | Suretyship and Mortgage. Ames's Cases on Suretyship. Wyman's Cases on Mortgage | 2 | 159 |
| Prof. Wambaugh | Agency. Wambaugh's Cases on Agency | 2 | 9 |
| Prof. Brannan | Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and the Negotiable Instruments Law | 2 | 74 |
| Prof. Gray | Evidence. Thayer's Cases on Evidence | 2 | 8 |
| Prof. Beale | Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1 | 2 | 3 |
| Asst. Prof. Warren | Property II. Gray's Cases on Property, vols. 3, 4 | 2 | 8 |
| Prof. Williston | Sales of Personal Property. Williston's Cases on Sales | 2 | 25 |
| Prof. Ames | Trusts. Ames's Cases on Trusts (2d ed.) | 2 | 12 |
| Mr. Dutch | Admiralty. Ames's Cases on Admiralty | 1 | 9 |
| Prof. Williston | Bankruptcy. Williston's Cases on Bankruptcy | 1 | 31 |
| Asst. Prof. Wyman | Carriers. Beale and Wyman's Cases on Public Service Companies | 1 | 41 |
| Prof. Beale | Damages. Beale's Cases on Damages | 1 | 67 |
| Mr. Dutch | Equity III. Ames's Cases in Equity Jurisdiction, vol. 2 | 1 | 58 |
| Prof. Wambaugh | Insurance. Wambaugh's Cases on Insurance | 1 | 19 |
| Prof. Beale | Municipal Corporations. Smith's Cases on Municipal Corporations | 1 | 19 |
| Prof. Ames | Persons. Smith's Cases on Persons | 1 | 36 |
| Mr. Schaub | Quasi-Contracts. Scott's Cases on Quasi-Contracts | 1 | 15 |

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percentage of college graduates, and in the number of colleges represented by their graduates. The figures for the current year will be slightly increased by later entries.

The number of men in the first-year class this year coming from other colleges than Harvard exceeds by 3 that of a year ago. And yet the class is smaller by 40 than the entering class of last year. We have therefore the unprecedented experience of a decrease in a single year of 43 Harvard graduates in the first-year class. This result is explained partly by the establishment of the Graduate School of Business, and by the depression in business, but is chiefly due to the increasing attractiveness of business and scientific careers.

The table on pages 165, 166 gives the courses of study and instruction during the year, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

During the twelve months from August 1, 1907, to August 1, 1908, 6,185 bound volumes and 817 pamphlets were added to the library. The library contained August 1, 1908, about 109,011 volumes and about 12,002 pamphlets.

The collection of portraits of judges and lawyers has been increased, during the past year, by one hundred and seventy-one engravings, six etchings, eight photographs, and five lithographs. The portraits now hanging on the walls of Austin Hall and Langdell Hall number 663, namely, 25 oil paintings, 461 engravings, 31 etchings, 115 photographs, one water color, three pencil sketches, 24 lithographs, and three bas-reliefs. There are also 54 trial scenes and views of law buildings.

By the generosity of Mr. Harry Milton Levy, a former member of the School, the President of the Harvard Club of Cincinnati, Mr. J. H. Gest, and the Dean of the Law School received five thousand dollars to be applied as they should think best for the benefit of the University. They agreed that one half of this gift should go to the College and the other half to the Law School to be lent to promising students of limited means. This gift is a welcome addition to the all-too-small loan funds of the school.

JAMES BARR AMES, *Dean.*

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# THE FACULTY OF MEDICINE

To the President of the University: —

Sir, — As Acting Dean of the Faculty of Medicine I have the honor to present my report for the academic year 1907–08.

Early in the year it was proposed that the conditions of admission to the Medical School should be amended to the extent of requiring not only a degree in Arts, Literature, Philosophy, or Science, and a knowledge of theoretical and descriptive inorganic chemistry, qualitative analysis, and elementary organic chemistry, but evidence of a sufficient knowledge of physics, biology, French, and German. A motion to establish this requirement failed of adoption; but it was voted to publish in the Catalogue a recommendation that college students intending to study medicine should pursue courses in the anatomy of vertebrates, with dissection, in general zoölogy, with training in the use of the microscope, in cryptogamic botany, in experimental physics, and in psychology, and should acquire a reading knowledge of the French and German languages. It was also voted to recommend that a physician be appointed to act in coöperation with the Committee of Freshman Advisers in the Faculty of Arts and Sciences of Harvard College, as an adviser to undergraduates contemplating the study of medicine. On the nomination of the Administrative Board of the Medical School, Dr. Lawrence J. Henderson, Instructor in Biological Chemistry, was subsequently appointed by the Corporation to serve in this capacity.

In view of many applications for admission to advanced standing in the Medical School by students who have been awarded their bachelor's degree in other universities after two years of academic work and two years of medical study, and in response to requests from other universities that students be allowed to complete the work for the Bachelor's degree by taking the requisite number of courses in the Harvard Medical School, the Faculty, after full discussion, declined to give its approval to the so-called combined course, by which the degrees of Bachelor of Arts or of Science and of Doctor of Medicine may be won in six years, and consistently adhered to the policy of Harvard University that neither academic nor graduate work shall be accepted for more than one degree. Thus Harvard University stands firmly to the requirement of a four years' academic course (although this work may be accomplished in three years), and four years of medical study for the Bachelor's and Doctor's degrees.



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Since 1901, the year in which the requirement of a Bachelor's degree for admission to the Medical School became effective, the Administrative Board of the Medical School has had authority to admit to the School men not holding an academic degree who gave evidence of having had an equivalent training: under this authority the Board has each year admitted a few men by special vote. As a safeguard against possible errors of judgment in thus admitting men without the Bachelor's degree, the Administrative Board this year recommended the adoption of a regulation similar to that successfully followed by the Law School for several years. In accordance with this recommendation the Faculty voted, in May, 1908, that students admitted to the Medical School by special vote of the Administrative Board (that is, students not holding the Bachelor's degree) shall be classed as special students, and therefore not candidates for the degree of Doctor of Medicine; but that if such special students shall obtain grade C in all the work of their first year in the School, they may be placed in regular standing, as candidates for the Doctor's degree, by special vote of the Administrative Board. It is believed that under this regulation competent students will demonstrate their fitness to work for the Doctor's degree, although for sufficient reasons they may not have received the Bachelor's degree. Those who fail to prove their fitness will naturally seek schools with a lower standard of requirements.

In December, 1907, the Treasurer reported the receipt of $2,000 from the Trustees under the will of Miss Harriet N. Lowell, under a testamentary provision that this bequest should be used by the Medical Department of the University "for scientific study and investigation, in any department of surgery, of the cause, treatment, prevention, and cure of disease, including dental surgery and pathology, in this country or in Europe, or wherever such study and investigation may be most advantageously pursued."

Early in the year 1908 there was received a gift, to the Harvard Medical School, now amounting to nearly $12,000, to endow a Teaching Fellowship in memory of Charles Follen Folsom, A.B. 1862, M.D. 1870, subsequently Lecturer on Hygiene and on Mental Diseases, later Assistant Professor of Mental Diseases, and Overseer in 1901–03. On June 23, 1908, it was voted by the President and Fellows that until otherwise ordered the Charles Follen Folsom Teaching Fellowship be assigned to the Department of Hygiene in the Medical School.

Early in the academic year the needs of the Dental School, for better housing and equipment, received the earnest consideration of

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the Faculty. As a result the Faculty pledged its cordial support of the plans proposed by the Administrative Board of the Dental School, and expressed its willingness that the Corporation should loan certain Medical School Funds to the Dental School Undertaking, to supplement the amount already raised through the efforts of the dental profession. It was also voted "that until required by the Medical School for its own purposes such unoccupied space in the Medical School Buildings as shall meet the needs of the Dental School be set apart for instruction in dental medicine." As a result of this action of the Faculty, ground was broken early in the summer for the erection of a new building for the Dental School, on land already acquired, on Longwood Avenue and Wigglesworth Street, in close proximity to the Medical School.

Repeating their experiment of the previous year, the Faculty offered a course of free public lectures on medical subjects, on Saturday evenings and Sunday afternoons, beginning January 4, and ending April 26, 1908. The attendance was most gratifying, ranging from 90 (on a rainy Saturday evening) to 500. Altogether 3,458 persons sought admission to the evening lectures, and 4,900 to the afternoon lectures, — an increase of 1,174 and 200 respectively over the attendance of the previous year. The legal seating capacity of the largest lecture-hall at the Medical School is 244; so that at twelve of the lectures not all who came could be accommodated. But for this want of a larger hall the increase of attendance, especially at the Sunday afternoon lectures, would have been greater.

In February and June 89 men were recommended to the President and Fellows for degrees: —

| | | | |
|---|---|---|---|
| Medical School | For the degree of M.D. (February) | 5 | |
| | " " " *cum laude* (February) | 1 | |
| | " " " (June) | 52 | |
| | " " " *cum laude* (June) | 12 | 70 |
| Dental School | For the degree of D.M.D. (February) | 0 | |
| | " " " (June) | 19 | |
| | " " " *cum laude* (June) | 0 | 19 |
| | Total | | 89 |

CHARLES M. GREEN, *Acting Dean.*

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# THE MEDICAL SCHOOL

To the President of the University: —

Sir, — I have the honor of presenting my report on the Medical School for the academic year 1907–08.

The Administrative Board was constituted as follows: Drs. F. C. Shattuck, W. F. Whitney, C. M. Green, C. Harrington, J. T. Bowen, H. Jackson, F. B. Mallory, W. B. Cannon, and J. Warren. Dr. Green, as Acting Dean, served as Chairman and Secretary.

*Buildings and Grounds.* — The several buildings have received necessary exterior repairs and painting, and the work of interior repainting will soon be finished. The land between the Power House, the Carnegie Laboratory, and the House of the Good Samaritan has been graded. The power plant, by vote of the Corporation, is now used as a supplementary laboratory for the Department of Engineering. Directory boards have been placed at all entrances of buildings.

*Building A.* — The floors of the Warren Museum and of the students' rooms have been stained and waxed, and additional furnishings have been provided for the students' sitting-room and library. The passage between Buildings A and B has been lined with waterproof cement. The lockers originally in this corridor have been placed in Building B.

*Building B.* — The rear entrance of the anatomical wing has been recessed, and the vestibule thus lengthened, so that unloading of supplies is entirely concealed. In the comparative anatomy wing two rooms have been fitted for instruction in bandaging, thus vacating the temporary accommodations in Building A. One room has been temporarily equipped for the electrician.

*Building C.* — A laboratory has been fitted for chemical research, and also a small laboratory for histological work has been equipped.

*Building D.* — Some partially finished laboratories have been completely equipped, and some additional students' lockers have been placed.

*Building E.* — A previously unfinished laboratory has been completed and equipped for research.

*Libraries.* — The reorganization of the various libraries has been completed, and all books owned by the School are now easily accessible. There has been consequently a steady growth in the use made of the libraries. The librarian has become familiar with the wants



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of the Faculty and of the students, and is thus able to give far more effective service. The accessions of the year have been eight hundred and sixty-nine, — ninety-eight by purchase and the remainder by gift or exchange. By far the greater number of purchases has been of periodical literature, of which the bound volumes amount to three hundred and sixty-eight. A new library of otology, of ninety books, has been incorporated with the anatomical library. It is the policy of the Committee on Libraries to unite in one building as many libraries as is compatible with common use, and to make the conditions for the withdrawal of books for special departments most free. The expenses of administration are thus greatly reduced, and the books are far more available to all. The expenses of the libraries are essentially the same as last year.

*Anatomy.* — Much progress has been made in arranging the collections in the Museum, which contain series of specimens believed to have few equals. Much X-ray work has been done, especially with hands and feet, with the object of comparing the skiagraphs with the actual specimens; as yet little has been published. Dr. John Warren has continued his studies of the paraphysis.

*Comparative Anatomy.* — The development of the department during the past year has advanced rapidly. A large amount of new material has been prepared for the elementary course in histology and embryology, including several thousand slides of human tissues made by Dr. Bremer, or under his direction. A number of permanent dissections have been made by Dr. Williams, which have been of great value to the students. Mr. Scammon has arranged and catalogued all the histological material. Drs. Lewis and Minot have continued work on the embryological collection, which now numbers 1414 series. The additions have been chiefly sheep, snake, and toad embryos; the sets of stages of these three species have advanced measurably towards completion. Dr. Emmel worked through the 83 series of the earliest stages of the axolotl, and made an index of the critical sections illustrating the processes of fertilization, etc.

The work of instruction has been enlarged by establishing a course in the anatomy and development of the eye, ear, and throat as a fourth-year elective. This course is recommended by the departments of otology, ophthalmology, and laryngology to students intending to specialize in those subjects. It is hoped to add a similar course in neurology next year. Many minor improvements in the class work have been effected.

The research work has gone on more actively than ever before. Dr. Minot has thoroughly revised his lectures on Age, and they have

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been republished in book form. Dr. Thyng's research on the development of the pancreas has been completed and printed, and a paper on intestinal diverticula by Drs. Lewis and Thyng has also appeared. Besides the published papers recorded in the *Gazette*, a number of investigations still under way deserve mention, as: Dr. Minot's on evolution of nuclei; Dr. Bremer's on cephalic nerves; Dr. Lewis's on a very young human embryo; Dr. Emmel's on regeneration; Mr. Scammon's on the embryology of the dog-fish; Dr. Williams's on the notochord; Mr. W. A. Clark's on the pituitary body; and Mr. Hedblom's on the glands of the uterus. It is hoped that all these investigations will be completed and published during the coming year.

*Physiology.* — Little change was made in the instruction in physiology during the past year. A new laboratory manual has been written by Dr. Cannon, based on seven years' experience in laboratory instruction, and the members of the next class will have the new directions and experiments in their work.

Dr. Cannon has continued his researches on the motor functions of the alimentary canal. He has published two reports of these investigations and has another in press. As Chairman of the Section on Pathology and Physiology of the American Medical Association he presented an address on "The Opposition to Medical Research." He has been appointed by the Association a member of the Council on the Defence of Medical Research. He gave the Annual Address in Medicine at the meeting of the Wisconsin State Medical Society, June 28.

Dr. E. G. Martin has pursued his quantitative study of faradic stimulation and has published two papers on the subject. Dr. E. B. Meigs has published a report of his work on the contraction of smooth muscle. Dr. Samuel Robinson has secured interesting results in an investigation of the physiological aspects of thoracic surgery, and has published two articles describing these results. Mr. D. N. Richards and Mr. H. E. Ruggles, medical students, have worked under Dr. Cannon's direction, determining under various conditions intra-intestinal pressures. Mr. Carl A. Hedblom, medical student, has worked with Dr. Cannon on conditions affecting the discharge of food from the stomach, and his results are ready for publication.

Messrs. F. C. Irving, A. M. Burgess, W. W. Palmer, G. D. Cutler, and R. H. Miller, students of the second class, acted as assistants in the laboratory during the term of instruction. The student assistants are to be replaced by teaching fellows during the coming year.

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*Comparative Physiology.* — Professor Porter, with Drs. Clarke, Pratt, and Marks, has continued his investigations of the circulation of the blood; several papers have been published, and others are in preparation. Dr. Adler has studied the effect of his new "normal saline" solution on the heart. Dr. Lothrop has investigated a problem in absorption, related to the repair of wounds. Professor Porter's weekly seminar has been continued.

*Biological Chemistry.* — Inasmuch as a knowledge of quantitative analysis is not required for admission to the Medical School, it has seemed more imperative, but also more difficult, to incorporate quantitative work in the course in biological chemistry. During the year nine balances, and a large number of volumetric flasks, pipettes, and burettes have been bought for the use of students, and considerable quantitative work has been introduced.

In the field of research Dr. Henderson has been particularly productive, having published eleven papers: of these, two (in collaboration with Messrs. Brink, Means, and Leland) deal with the effects of pressure on muscle; six, with the problem of neutrality in the body fluids and other media; and three (in collaboration with K. Spiro in Strassburg) are contributions to the problem of ionic equilibrium in the animal organism. Dr. Alsberg has written on the Guajac Reaction, and, with the collaboration of Mr. Clark, on the Egg of the Spiny Dog-fish; Dr. Folin, on Chemical Problems in Hospital Practice; Mr. Black, on B-oxybutyric acid; and Drs. Joslin and Goodall, on Salt Metabolism and Diabetes, on Metabolism on Salt-free Diets, and on the Value of Ammonia Determinations in Diabetes.

*Bacteriology.* — The members of this department have engaged in special investigations, the results of which have been published in some cases and are in preparation for publication in others. A number of graduate students of good quality have been received, — several seeking to fit themselves for special positions. The facilities of the department have been as usual freely open to, and used by, other departments; and a number of institutions have been supplied with material for teaching purposes. Accommodation has been provided for members of the Department of Laryngology for the purpose of carrying on special studies in the bacteriology of the air passages.

*Pathology.* — As at present constituted the Department of Pathology has intimate relations with the laboratories of the Boston City Hospital, the Massachusetts General Hospital, and the Long Island Hospital, all of which are directed by members of the department;

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while undergraduate instruction is conducted chiefly at the Medical School, special teaching of small sections of the class is carried on in the laboratories of these hospitals. With the increase in the complexity and number of methods of investigation, subdivisions of the work in pathology have become necessary, — each directed by members of the department who have had special training. Dr. Southard has had charge of the work in neuropathology; Dr. Tyzzer, of the work in tumor research under the provision of the Croft Cancer Commission; and Dr. Gay, of the work in serum pathology.

During the past year there have been numerous publications by members of the department. Among these should be mentioned that on tumor structure by Drs. Mallory and Wolbach; for the photomicrographs made for this work a prize of honor was given by the American Medical Association. The work of Dr. Wright on the histogenesis of the blood cells has led to entirely new conceptions of cell origin and fibrin formation. Studies by Drs. Gay and Southard on the condition of lowered resistance in the guinea-pig following the injection of such substances as horse serum have led to the formation of a general theory of anaphylaxis, which has been supported by further work. Dr. Tyzzer has been engaged chiefly in the experimental study of heredity in animal tumors, and he has described and given the life history of a new protozoan which is found in the stomach of the mouse. There has been great activity in research; and great assistance has been given by the Phillips Fund, which has been used to meet increased laboratory expenses, to pay the salaries of new positions, and to give small increases in the salaries of some of the assistants.

Dr. J. H. Wilson has been appointed Research Assistant in Pathology, in recognition of the importance of chemical methods of investigation in pathology as in all branches of medicine. Dr. Wilson's work will be the investigation of the physical chemistry of the serum and tissue fluids in conditions of health and disease. The department has met with a distinct loss in the resignation of Instructor S. Burt Wolbach to accept the position of Associate Professor of Pathology and Director of the Bender Laboratory at Albany, New York.

*Comparative Pathology.* — Seven papers have been published dealing with investigations on tetanus, tuberculosis, toxins and antitoxins, and parasitic protozoa. Among the unfinished or still unpublished work of the department are the researches of Mr. H. R. Brown on the bacteriology of poultry in cold storage, and on the harmful bacteria in milk; of Dr. H. P. Johnson on certain diseases

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of gypsy-moth larvae, and of Mr. Carl Ten Broeck on the bacteriology of infantile paralysis, — all conducted for the Commonwealth. Professor Smith has completed a long investigation on the vaccination of cattle against tuberculosis for the Massachusetts Society for Promoting Agriculture. If such useful work is to be carried on successfully, if the laboratories are to be kept open during the entire year in the interest of the State and other public agencies, and if the department is to enlarge its facilities for advanced teaching, more assistance will be indispensable.

*Pharmacology and Therapeutics.* — Professor Pfaff has studied the effects of purgatives on the kidneys of different animals. In certain animals purgatives produced Bright's disease and consequent death, thus corroborating clinical observations made on certain patients that purgatives caused renal irritation. The results of this investigation were reported in May to the Association of American Physicians. Dr. Tyrode continued his investigations on the pharmacological effects of camphoric acid, and demonstrated that this agent does not have the supposed effect for which it is used in practice. The results obtained by animal experimentation were subsequently verified by a series of clinical tests. Dr. Tyrode has published a text-book on pharmacology.

*Theory and Practice of Physic.* — During the year the laboratory equipment of the department has been much increased, so that now more extended laboratory facilities can be offered to undergraduate and graduate students. In addition to the regular class instruction, in this laboratory, histological, bacteriological, chemical, and physiological methods can be applied in the investigation of clinical problems, and already a number of men have availed themselves of the opportunity for such work.

During the year thirty-three publications have appeared from members of the department and workers in the laboratory. These have been printed in a number of different medical journals, and cover a fairly wide range of subjects. Dr. Christian has published papers on multiple myeloma and on experimental nephritis; Dr. Joslin on isolation and blood cultures in typhoid fever, ammonia excretion in diabetes, and experiments with an ash-free diet; Dr. Hewes on fats excreted in the feces; Dr. Stone on endocarditis, tuberculous peritonitis, and the home treatment of tuberculosis; Dr. Badger on blood pressure in eclampsia; Dr. Pratt on steatorrhea without jaundice or demonstrable pancreatic disease, experimental anaemia, and on purpura and haemophilia; Dr. Adler on the chemical separation of anaphylactin and on a physiologically isotonic solution of

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salts; Dr. Palfrey on Sahli's butyrometric test of gastric function; Dr. Robbins on sarcoma of the pleura; Dr. Lee on the treatment of staphylococcus aureus infections with vaccines and that of localized tuberculosis with tuberculin; Dr. Channing Frothingham, Jr., on the viability of proteolytic enzymes in tissues and on experimental trichinosis; Dr. Talbot on the chemical composition of fecal curds; Dr. R. M. Smith on the histogenesis of urinary casts; and Dr. Peabody on the diagnosis of typhoid by cultures of the blood from the ear. Dr. Overlander and Dr. Goodall were associated with Dr. Joslin in several of the publications, and Dr. Hatch with Dr. Pratt in one. During the year Drs. Christian, Joslin, and Pratt contributed to the *Boston Medical and Surgical Journal* reports on progress in various fields of medicine. Dr. Badger is editor of "School Hygiene."

A new fourth-year elective course was given to four students each month at the Carney Hospital, of which Dr. Christian is physician-in-chief. This course gives the students continuous access to ward patients as in the course given at the Massachusetts General Hospital. The other courses were continued as heretofore.

Dr. Pratt spent five months abroad engaged for the greater part of the time in work on experimental anaemia at the laboratory of the Heidelberg medical clinic. Members of the department attended almost all of the more important medical meetings held during the year, and contributed papers to their programmes.

Under the editorship of members of the department a volume containing twenty-five studies was published in honor of Professor Fitz's sixty-fifth birthday, May 5, 1908. These were contributed by his former house pupils at the Massachusetts General Hospital and by the assistants in the Department of Theory and Practice of Physic. They appeared as a special number of the *Boston Medical and Surgical Journal*, and copies of the volume were sent to the leading medical libraries at home and abroad.

*The Division of Surgery.* — Instruction in the several departments has not materially changed during the year. The close relationship of the Massachusetts General Hospital, the Boston City Hospital, and the Children's Hospital with the Division of Surgery has continued, and student assistants have been regularly supplied to these institutions to take part in the work in the wards and outpatient departments. The establishment of an additional assistantship in surgery, the incumbent to give his whole time to the instruction of fourth-year students at the Massachusetts General Hospital,

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has proved to be of distinct advantage. A course of evening lectures has been given once a week in the latter part of the fourth year by some of the surgical teachers, and by Associate Professors Hugh Young and Harvey Cushing of the Johns Hopkins Medical School.

In the Department of Surgical Pathology there has been a considerable replacement of old specimens with better new ones, and an addition of many new specimens to the permanent teaching collections has been made. A large number of lantern slides have also been added to the collection. Professor Richardson has loaned 180 drawings and paintings of gross pathological specimens, thus bringing the available teaching collection to between 600 and 700 illustrations. Besides these drawings the department has a reasonably good collection of gross surgical specimens, many of which are Kaiserling preparations. A large and well lighted room in Building D has been equipped for the exhibition of gross specimens.

The Laboratory of Surgical Research has been in active use since its opening in March, 1907. Permission to do research work has been given to the following gentlemen on the designated subjects: Drs. N. R. Mason, the strength of Caesarean Section Scars; Bradford and Christiernin, atrophy following joint fixation; C. L. Scudder, omentopexy; A. T. Legg, atrophy and joint diseases; S. Robinson, lung surgery; J. C. Hubbard, arterial surgery; G. H. Monks, lavage of the intestine; F. H. Lahey, surgery of the gas bacillus; J. D. Barney, surgery of the ureters; W. C. Quimby and C. A. Porter, surgery of the vas deferens; Z. B. Adams, producing and reducing scoliosis in young dogs; and J. B. Blake, the use of sterile oil in the peritoneal cavity. Reports of the research work done by Drs. Scudder, Legg, Monks, and Robinson have already been published. Sums of money have been granted in certain instances to meet the necessary expenses of research work. Use has also been made of this laboratory to give instruction in operative surgery on living, anaesthetized animals, which were not allowed to recover from the anaesthetic. Five graduates and eleven fourth-year students have received this instruction.

The work of the Caroline Brewer Croft Cancer Commission has continued under the direction of Dr. E. E. Tyzzer, and has been amplified by means of an anonymous gift of $2,500, for the investigation of cancer, which was received in October, 1907. Dr. Tyzzer has continued the study of the inoculability and spontaneous appearance of mouse tumors, and also his investigations upon the influence of heredity in the occurrence of tumors of mice. Dr. F. P. Gay has

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investigated a sarcoma of the rat obtained from Dr. Flexner of the Rockefeller Institute, and Dr. W. P. Graves has studied the effects of trypsin inoculation on normal and abnormal tissues. The fourth report of the Commission was published in November, 1907.

*Other Departments.* — No especial comment is called for regarding other departments. In addition to the prescribed didactic instruction at the Medical School, the clinical teachers have carried out the large amount of hospital instruction provided by the course of study. In the third year clinical teaching is chiefly, and in the fourth year entirely, given to small sections of the classes, — a plan most profitable for the student, but time-consuming for the teacher. In the fourth year over 64 per cent of the elective courses were given by the departments of medicine, surgery, obstetrics, and pediatrics, and over 18 per cent by the special clinical departments; these departments with the Department of Anatomy gave over 91 per cent of the fourth-year instruction.

*The Warren Museum.* — There has been a steady increase of specimens, and seven new cases have been placed in the upper gallery for the extension of the anatomical collection, which is being rapidly increased through the work and interest of Professor Dwight. No extensive group of specimens has been added during the year; but gaps in existing groups are being continually filled. Many of the commoner lesions are still lacking, especially of the tubercular lesions of the viscera; good specimens of the pulmonary lesions will be gratefully received. The Curator has thought it advisable to issue bulletins of special collections rather than one complete catalogue of the Museum; it is gratifying, therefore, that during the year a gift of $200 has been received from Miss Rebecca Warren Brown, which will defray the expense of a bulletin of the Buckminster Brown collection of specimens relating to orthopedic surgery.

The plaster busts in the Museum have been replaced with reproductions in marble, and a marble bust of Professor George Cheyne Shattuck has been recently received as a gift; much has thus been added to the beauty and dignity of the large central hall.

In the late spring there was a public exhibition of engraved portraits of noted medical men in a part of the upper gallery. The nucleus of the collection consisted of about seventy valuable specimens presented to the Medical School by the Royal College of Surgeons, England, through the good offices of Dr. Walter G. Chase; and it was augmented by loans from the private collections of Dr. Chase and Dr. Ernest B. Young, both of whom spent much time and

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care in the arrangement of the portraits. The exhibition was very interesting and attracted many visitors.

The collection of malformations belonging to the Museum is most valuable. Dr. Augustus Thorndike has devoted much time to their study, and has been of great assistance in their arrangement; he has also made several interesting dissections. The specimens in the collection have been more fully labelled, which it is believed will make them more available for study. All the plaster casts representing deformities or disease have been repainted of a uniform color, which adds greatly to the general appearance of the Museum. Many of the loose bones have been mounted on permanent tablets; the pathological appearances are thus more easily seen, and labels can be placed conspicuously on the stands. There is a steady increase each year in the number of visitors and in the use of specimens.

*The Proctor Fund for the Study of Chronic Diseases.* — During the year appropriations were made from this Fund to Dr. J. H. Pratt, to study fat metabolism in chronic diseases of the pancreas; to Dr. E. T. F. Richards, to investigate certain aspects of chronic disease at the Danvers Insane Hospital; to Mr. F. H. McCrudden, for a study of the methods of determining calcium and magnesium salts in the presence of phosphates and iron; to Dr. A. H. Wentworth, for the study of infantile atrophy; to Dr. F. W. Palfrey and Dr. W. Tileston, for the investigation of chronic disease at the Massachusetts General Hospital; to Dr. R. I. Lee, for the investigation of chronic disease at the House of the Good Samaritan; and to Dr. P. A. Lewis, for a study of arteriosclerosis.

*Alumni Fund.* — Through the continued generosity of Medical School Alumni, not only was a substantial addition made to the permanent fund held by the Corporation, but the sum of $1,500 was given for use in 1907–08 in the payment of the salaries of some of the younger teachers, especially of those who devote most of their time to teaching. In recognition of this generous assistance of the alumni, the President and Fellows early in 1908 expressed their willingness, upon nomination by the Faculty in the usual manner, to give the title of "Alumni Assistant" or "Alumni Instructor" to any members of the teaching staff whose salaries are supported wholly or in part by the Alumni Fund. Doubtless next year the Faculty will recommend certain changes of title in accordance with this intimation of the Corporation.

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*Scholarships and Fellowships.* — The Scholarships and Fellowships were awarded as follows: —

| | | |
|---|---|---|
| Joseph Pearson Oliver Scholarship, | R. C. Main, A.M., | 1st Class. |
| Barringer Scholarship, No. 1, | W. A. Clark, A.M., | 1st " |
| Isaac Sweetser Scholarship, | F. P. Gaunt, A.B., | 1st " |
| Claudius M. Jones " | R. C. Hunt, A.B., | 3d " |
| Hilton " | M. H. Neill, A.B., | 3d " |
| " " | R. D. Leonard, A.B., | 2d " |
| Barringer " No. 2, | I. Gerber, A.B., | 2d " |
| Alfred Hosmer Linder Scholarship, | E. S. Kilgore, S.B., | 3d " |
| Eveleth " | W. E. Preble, A.B., | 3d " |
| " " | R. A. Quigley, S.B., | 4th " |
| " " | E. H. Sawyer, S.B., | 4th " |
| Edward Wigglesworth " | P. W. Emerson, A.B., | 1st " |
| Charles B. Porter " | G. B. Corcoran, A.B., | 2d " |
| John Thomson Taylor " | H. V. Hendricks, S.B., | 3d " |
| Lucius F. Billings " | F. O. West, S.B., | 4th " |
| Orlando W. Doe " | W. J. C. Sharpe, A.B., | 4th " |
| Charles Pratt Strong " | H. S. Bernstein, A.B., | 4th " |
| David Williams Cheever " | H. H. Crabtree, A.B., | 1st " |
| Lewis and Harriet Hayden " (½) | R. Birnie, Jr., A.B., | 1st " |
| " " " " " | A. B. Terrell, S.B., | 1st " |
| Anonymous Gift, (½) | H. H. Smith, A.B., | 3d " |
| " " " | H. Morrison, A.B., | 4th " |
| Cotting Gift, | C. Popoff, A.B., | 2d " |
| James Jackson Cabot Fund | C. A. Hedblom, A.B., | 1st " |
| John Foster Fund (½) | F. E. Stockton, A.B., | 1st " |

The George Cheyne Shattuck Memorial Fellowship was awarded Samuel Robinson, A.B., M.D.

The Charles Eliot Ware Memorial Fellowship was awarded Francis H. McCrudden, S.B.

The John Ware Memorial Fellowship was awarded Fred W. Thyng, A.M., Ph.D.

*Division of Scholarships.* — On recommendation of the Administrative Board of the Medical School the Faculty of Medicine, in December, 1907, voted that the Corporation be requested to authorize this Board to divide among two or more students the respective scholarships of the School which were not specifically established for the benefit of a single student, when in the judgment of the Board such a course would be advantageous in the wise administration of this trust. The President and Fellows subsequently voted that the Administrative Board of the Medical School be authorized to propose the names of two or more students as beneficiaries on the following scholarship funds: The Lewis and Harriet Hayden Scholarship, the Joseph Eveleth Scholarships, the Hilton Scholarships, the Lucius F.

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Billings Scholarship, the Anonymous Gift, the Cotting Gift, and the John Foster Fund.

*Statistics.* — The statistics of the School will be found in the following tables: —

## COURSES OF INSTRUCTION, 1907–08

### FIRST YEAR

| | Students examined. |
|---|---|
| Anatomy. — Professor T. Dwight, Demonstrator Warren, Assistant Flagg, Assistant Mosher, Assistant Butler, Assistant Marcy, Assistant Cheever, Assistant Barney, Assistant Scannell, Assistant George. | 81 |
| Physiology. — Professor W. T. Porter, Professor Cannon, Instructor Martin, Instructor Meigs. | 93 |
| Comparative Anatomy. — Professor Minot, Asst. Professor Lewis, Demonstrator Bremer, Instructor Williams, Instructor Shepard, Austin Teaching Fellow Emmel, Austin Teaching Fellow Scammon. | 86 |
| Biological Chemistry. — Associate Professor Folin, Instructor Alsberg, Instructor Henderson, Assistant Black, Assistant McCrudden. | 79 |

### SECOND YEAR

| | |
|---|---|
| Bacteriology. — Professor Ernst, Instructor Frothingham, Assistant Page, Assistant Perry, Assistant Worthington, Assistant Everett, Assistant Tobey, Austin Teaching Fellow Floyd. | 84 |
| Pathology and Pathological Anatomy. — Professor Councilman, Associate Professor Mallory, Asst. Professor Nichols, Asst. Professor Wright, Asst. Professor Southard, Instructor Wolbach, Assistant Tyzzer, Assistant Gay, Assistant Ordway, Assistant Robertson, Assistant Bryant. | 79 |
| Comparative Pathology. — Professor T. Smith, Instructor Wolbach, Assistant Robertson, Assistant Fabyan, Austin Teaching Fellow Lewis. | |
| Hygiene. — Professor Harrington, Assistant Magrath. | 78 |
| Theory and Practice. — Professor Fitz, Assistant Professor Christian, Instructor Cutler, Assistant Stone, Instructor Joslin, Instructor Hewes, Assistant White, Assistant Badger, Assistant Pratt, Assistant Adler, Assistant Overlander, Assistant Robbins, Assistant Lee. | |
| Clinical Medicine. — Professor Shattuck, Asst. Professor Sears, Assistant J. M. Jackson, Instructor Cabot, Instructor H. Jackson, Assistant Robey, Assistant Locke, Assistant Lord. | |
| Surgery. — Professor Richardson, Professor Burrell, Asst. Professor Nichols, Instructor Lothrop, Instructor J. B. Blake. | |

### THIRD YEAR

| | |
|---|---|
| Therapeutics. — Professor Pfaff, Instructor Tyrode, Assistant Lloyd. | 72 |
| Theory and Practice of Medicine. — Professor Fitz, Instructor Cutler, Assistant Stone, Instructor Joslin, Assistant Badger, Assistant Pratt. | 66 |
| Obstetrics. — Professor Green, Instructor Newell, Assistant Swain, Assistant Friedman, Assistant Torbert, Assistant Mason. | 67 |

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Otology. — Professor Blake, Instructor Crockett, Instructor Hammond, Assistant Mosher, Assistant Walker. 67

Ophthalmology. — Asst. Professor Standish, Instructor Jack, Instructor Quackenboss, Assistant Clap, Assistant Spalding, Assistant Haskell. 66

Laryngology. — Asst. Professor Coolidge, Instructor Cobb, Assistant Clark, Assistant Goodale, Assistant Mosher, Assistant Coffin. 68

Syphilis. — Asst. Professor Post, Assistant C. M. Smith. 66

Clinical Obstetrics. — Professor Green, Instructor Newell, Assistant Swain, Assistant Friedman, Assistant Torbert, Assistant Mason.

Dermatology. — Asst. Professor Bowen, Assistant Towle, Assistant Burns. 69

Diseases of the Nervous System. — Professor Putnam, Instructor Taylor, Assistant Waterman. 70

Pediatrics. — Professor Rotch, Asst. Professor McCollom, Assistant Professor Morse, Instructor Ladd, Clinical Instructor Craigin, Assistant Dunn, Assistant Bowditch. 67

Psychiatry. — Instructor Cowles. 68

Gynaecology. — Professor Green, Instructor Newell, Assistant Storer, Assistant Graves, Assistant Young, Assistant Mason. 67

Surgery and Clinical Surgery. — Professor Warren, Professor M. H. Richardson, Professor Burrell, Professor Bradford, Instructor Thorndike, Instructor Lothrop, Lecturer Gay, Lecturer Monks, Assistant Lund, Assistant Balch, Assistant Crandon, Instructor Porter, Lecturer Harrington, Assistant Codman. 68

Genito-Urinary Surgery. — Lecturer Watson, Instructor Thorndike.

Clinical Medicine. — Professor Shattuck, Asst. Professor Sears, Instructor Vickery, Assistant Bartol, Instructor H. Jackson, Assistant Smith. 70

The following elective work was done by the students of the fourth year, under the supervision of the heads of Departments: —

Number of Half-Courses Elected for 1907–08

| | | | |
|---|---|---|---|
| Anatomy | 49 | Clinical Pathology | 6 |
| Comparative Anatomy | 0 | Pediatrics | 70 |
| Embryology | 3 | Clinical Surgical Pathology | 2 |
| Histology | 0 | Surgery | 102 |
| Cytology | 0 | Genito-Urinary Surgery | 6 |
| Physiology | 10 | Orthopedic Surgery | 19 |
| Comparative Physiology | 2 | Surgical Pathology | 2 |
| Biochemistry | 5 | Obstetrics | 58 |
| Bacteriology | 0 | Gynaecology | 25 |
| Pathology | 14 | Dermatology and Syphilis | 3 |
| Comparative Pathology | 2 | Neurology and Psychiatry | *28 |
| Neuropathology | 0 | Ophthalmology | 9 |
| Hygiene | 1 | Otology | 7 |
| Pharmacology | 0 | Laryngology | 16 |
| Clinical Medicine | 84 | Legal Medicine | 0 |
| Theory and Practice | 45 | | 568 |

* 8 courses by one man.

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## FINAL EXAMINATIONS

| | 1904. | | | | 1905. | | | | 1906. | | | | 1907. | | | | 1908. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. |
| **First Class:—** | | | | | | | | | | | | | | | | | | | | |
| Histology | 68 | 4 | 72 | 5 | 54 | 6 | 60 | 10 | 66 | 6 | 72 | 8 | 72 | 10 | 82 | 12 | 79 | 7 | 86 | 8 |
| Biological Chemistry | 67 | 3 | 70 | 4 | 54 | 5 | 59 | 8 | 60 | 7 | 67 | 10 | 63 | 11 | 74 | 15 | 64 | 15 | 79 | 19 |
| Anatomy | 69 | 3 | 72 | 4 | 56 | 1 | 57 | 1 | 57 | 8 | 65 | 12 | 62 | 13 | 75 | 17 | 65 | 16 | 81 | 20 |
| Physiology | 50 | 34 | 84 | 40 | 60 | 19 | 79 | 24 | 69 | 17 | 86 | 18 | 77 | 11 | 88 | 12 | 77 | 16 | 93 | 17 |
| **Second Class:—** | | | | | | | | | | | | | | | | | | | | |
| Pathological Anatomy | 70 | 4 | 74 | 5 | 58 | 9 | 67 | 13 | 60 | 7 | 67 | 10 | 61 | 4 | 65 | 6 | 66 | 13 | 79 | 16 |
| Bacteriology | 64 | 8 | 72 | 11 | 53 | 10 | 63 | 16 | 61 | 6 | 67 | 9 | 54 | 15 | 69 | 22 | 62 | 22 | 84 | 26 |
| Hygiene | 64 | 3 | 67 | 4 | 63 | 4 | 67 | 6 | 69 | 4 | 73 | 5 | 51 | 17 | 68 | 25 | 73 | 5 | 78 | 6 |
| **Third Class:—** | | | | | | | | | | | | | | | | | | | | |
| Theory and Practice | 71 | 1 | 72 | 1 | 67 | 4 | 71 | 5 | 72 | 1 | 73 | 1 | 65 | 1 | 66 | 1 | 60 | 6 | 66 | 9 |
| Surgery | 65 | 2 | 67 | 3 | 63 | 0 | 63 | 0 | 60 | 2 | 62 | 3 | 64 | 1 | 65 | 1 | 62 | 3 | 65 | 5 |
| Obstetrics | 68 | 10 | 78 | 13 | 70 | 8 | 78 | 11 | 65 | 4 | 69 | 6 | 60 | 7 | 67 | 10 | 58 | 9 | 67 | 13 |
| Pediatrics | 70 | 6 | 76 | 8 | 69 | 6 | 75 | 8 | 68 | 3 | 71 | 4 | 69 | 0 | 69 | 0 | 67 | 0 | 67 | 0 |
| Dermatology | 66 | 10 | 76 | 13 | 71 | 2 | 73 | 3 | 68 | 4 | 72 | 5 | 65 | 3 | 68 | 4 | 61 | 8 | 69 | 12 |
| Gynaecology | 71 | 7 | 78 | 9 | 70 | 3 | 73 | 4 | 61 | 9 | 70 | 13 | 65 | 0 | 65 | 0 | 57 | 10 | 67 | 15 |
| Neurology | 73 | 6 | 79 | 7 | 67 | 5 | 72 | 7 | 68 | 6 | 74 | 9 | 62 | 5 | 67 | 7 | 66 | 4 | 70 | 6 |
| Therapeutics | . | . | . | . | 61 | 11 | 72 | 15 | 48 | 28 | 76 | 37 | 59 | 16 | 75 | 21 | 59 | 13 | 72 | 18 |
| Clinical Medicine | . | . | . | . | 63 | 6 | 69 | 9 | 70 | 6 | 76 | 8 | 62 | 7 | 69 | 10 | 63 | 7 | 70 | 10 |
| Clinical Surgery | . | . | . | . | 67 | 1 | 68 | 1 | 72 | 0 | 72 | 0 | 63 | 0 | 63 | 0 | 61 | 0 | 61 | 0 |
| Syphilis | . | . | . | . | 69 | 1 | 70 | 1 | 70 | 0 | 70 | 0 | 66 | 0 | 66 | 0 | 64 | 4 | 68 | 6 |
| Ophthalmology | . | . | . | . | 62 | 4 | 66 | 6 | 69 | 6 | 75 | 8 | 71 | 2 | 73 | 3 | 59 | 7 | 66 | 10 |
| Otology | . | . | . | . | 68 | 0 | 68 | 0 | 64 | 5 | 69 | 8 | 65 | 1 | 66 | 1 | 64 | 3 | 67 | 5 |
| Laryngology | . | . | . | . | 65 | 4 | 69 | 6 | 69 | 0 | 69 | 0 | 64 | 2 | 66 | 3 | 66 | 2 | 68 | 3 |
| Psychiatry | 71 | 5 | 76 | 6 | 74 | 0 | 74 | 0 | 70 | 3 | 73 | 4 | 66 | 0 | 66 | 0 | 65 | 3 | 68 | 4 |

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| Fourth Class. — Electives: — | | |

## FINAL EXAMINATIONS

| | 1904. | | | | 1905. | | | | 1906. | | | | 1907. | | | | 1908. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. | Passed. | Failed. | Total. | % Failed. |
| **First Class:—** | | | | | | | | | | | | | | | | | | | | |
| Histology | 68 | 4 | 72 | 5 | 54 | 6 | 60 | 10 | 66 | 6 | 72 | 8 | 72 | 10 | 82 | 12 | 79 | 7 | 86 | 8 |
| Biological Chemistry | 67 | 3 | 70 | 4 | 54 | 5 | 59 | 8 | 60 | 7 | 67 | 10 | 63 | 11 | 74 | 15 | 64 | 15 | 79 | 19 |
| Anatomy | 69 | 3 | 72 | 4 | 56 | 1 | 57 | 1 | 57 | 8 | 65 | 12 | 62 | 13 | 75 | 17 | 65 | 16 | 81 | 20 |
| Physiology | 50 | 34 | 84 | 40 | 60 | 19 | 79 | 24 | 69 | 17 | 86 | 18 | 77 | 11 | 88 | 12 | 77 | 16 | 93 | 17 |
| **Second Class:—** | | | | | | | | | | | | | | | | | | | | |
| Pathological Anatomy | 70 | 4 | 74 | 5 | 58 | 9 | 67 | 13 | 60 | 7 | 67 | 10 | 61 | 4 | 65 | 6 | 66 | 13 | 79 | 16 |
| Bacteriology | 64 | 8 | 72 | 11 | 53 | 10 | 63 | 16 | 61 | 6 | 67 | 9 | 54 | 15 | 69 | 22 | 62 | 22 | 84 | 26 |
| Hygiene | 64 | 3 | 67 | 4 | 63 | 4 | 67 | 6 | 69 | 4 | 73 | 5 | 51 | 17 | 68 | 25 | 73 | 5 | 78 | 6 |
| **Third Class:—** | | | | | | | | | | | | | | | | | | | | |
| Theory and Practice | 71 | 1 | 72 | 1 | 67 | 4 | 71 | 5 | 72 | 1 | 73 | 1 | 65 | 1 | 66 | 1 | 60 | 6 | 66 | 9 |
| Surgery | 65 | 2 | 67 | 3 | 63 | 0 | 63 | 0 | 60 | 2 | 62 | 3 | 64 | 1 | 65 | 1 | 62 | 3 | 65 | 5 |
| Obstetrics | 68 | 10 | 78 | 13 | 70 | 8 | 78 | 11 | 65 | 4 | 69 | 6 | 60 | 7 | 67 | 10 | 58 | 9 | 67 | 13 |
| Pediatrics | 70 | 6 | 76 | 8 | 69 | 6 | 75 | 8 | 68 | 3 | 71 | 4 | 69 | 0 | 69 | 0 | 67 | 0 | 67 | 0 |
| Dermatology | 66 | 10 | 76 | 13 | 71 | 2 | 73 | 3 | 68 | 4 | 72 | 5 | 65 | 3 | 68 | 4 | 61 | 8 | 69 | 12 |
| Gynaecology | 71 | 7 | 78 | 9 | 70 | 3 | 73 | 4 | 61 | 9 | 70 | 13 | 65 | 0 | 65 | 0 | 57 | 10 | 67 | 15 |
| Neurology | 73 | 6 | 79 | 7 | 67 | 5 | 72 | 7 | 68 | 6 | 74 | 9 | 62 | 5 | 67 | 7 | 66 | 4 | 70 | 6 |
| Therapeutics | . . | . . | . . | . | 61 | 11 | 72 | 15 | 48 | 28 | 76 | 37 | 59 | 16 | 75 | 21 | 59 | 13 | 72 | 18 |
| Clinical Medicine | . . | . . | . . | . | 63 | 6 | 69 | 9 | 70 | 6 | 76 | 8 | 62 | 7 | 69 | 10 | 63 | 7 | 70 | 10 |
| Clinical Surgery | . . | . . | . . | . | 67 | 1 | 68 | 1 | 72 | 0 | 72 | 0 | 63 | 0 | 63 | 0 | 61 | 0 | 61 | 0 |
| Syphilis | . . | . . | . . | . | 69 | 1 | 70 | 1 | 70 | 0 | 70 | 0 | 66 | 0 | 66 | 0 | 64 | 4 | 68 | 6 |
| Ophthalmology | . . | . . | . . | . | 62 | 4 | 66 | 6 | 69 | 6 | 75 | 8 | 71 | 2 | 73 | 3 | 59 | 7 | 66 | 10 |
| Otology | . . | . . | . . | . | 68 | 0 | 68 | 0 | 64 | 5 | 69 | 8 | 65 | 1 | 66 | 1 | 64 | 3 | 67 | 5 |
| Laryngology | . . | . . | . . | . | 65 | 4 | 69 | 6 | 69 | 0 | 69 | 0 | 64 | 2 | 66 | 3 | 66 | 2 | 68 | 3 |
| Psychiatry | 71 | 5 | 76 | 6 | 74 | 0 | 74 | 0 | 70 | 3 | 73 | 4 | 66 | 0 | 66 | 0 | 65 | 3 | 68 | 4 |

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| FOURTH CLASS. — ELECTIVES: — | | |

## GENERAL STATISTICS OF THE SCHOOL

| | |
|---|---|
| New matriculants | 101 |

The whole number of students in attendance: —

| | |
|---|---|
| In courses for graduates | 81 |
| Fourth Class | 57 |
| Third Class | 55 |
| Second Class | 84 |
| First Class | 101 |
| Special Students | 6 |
| Total | 384 |

| | |
|---|---|
| Applicants for Degree (February) | 6 |
| Applicants for Degree (June) | 67 |
| | 73 |
| Rejected | 3 |
| Graduated | 70 |

Of the 70 students who received the degree of Doctor of Medicine, 12 received the degree *cum laude*.

| | Summer Courses. | | | | | Graduate Courses. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1904. | 1905. | 1906. | 1907. | 1908. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
| Courses taken | 177 | 222 | 306 | 281½ | 178 | 59½ | 88 | 104 | 93½ | 125 |
| Students | 135 | 173 | 192 | 194 | 136 | 49 | 72 | 77 | 68 | 81 |
| Receipts | $4942 | $6497 | $8793 | $8501.50 | $4886.50 | $1446 | $2207 | $2663 | $2141 | $2932.50 |

In the Summer Courses there was a large diminution both in the number of students and in the number of courses taken. This was due chiefly to the fact that a popular teacher was absent in Europe, and inadequate provision was made for his courses.

In the Graduate Courses, on the other hand, there was a gratifying increase in the number both of students and of courses taken.

*Class Day.* — For the first time in the history of the School the graduating class gave a Class Day. It was held in the afternoon of May 29, under most favorable weather conditions. By invitation Professor W. T. Porter gave a scholarly oration; and there were interesting addresses by the Class President and others, interspersed with singing. Following the formal exercises there was a reception in the court, and refreshments were served on the terrace.

CHARLES M. GREEN, *Acting Dean.*

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# THE DENTAL SCHOOL

To the President of the University: —

Sir, — As Dean of the Dental School I have the honor to submit the following report for the academic year 1907–08.

The number of students enrolled was 68, divided as follows: —

| | |
|---|---|
| Post-Graduate students | 2 |
| Third-year students | 25 |
| Second-year students | 21 |
| First-year students | 20 |
| | 68 |

There were twenty-two candidates for the degree in June, four of whom failed in the final examinations, leaving a graduating class of eighteen.

Instruction was given as follows: —

Anatomy. — Professor T. Dwight, Demonstrator Warren, Assistants Flagg, Mosher, Butler, Marcy, Cheever, Scannell, and George. 424 hours.

Physiology. — Professor Cannon, Instructors Martin and Meigs. 348 hours.

Comparative Anatomy. — Professor Minot, Asst. Professor Lewis, Demonstrator Bremer, Instructors Williams and Shepard, Austin Teaching Fellows Emmel and Scammon. 252 hours.

Physiological and Dental Chemistry. — Lecturer H. Carleton Smith. 302 hours.

Bacteriology. — Professor H. C. Ernst, Instructor Frothingham, Assistants Page, Worthington, Perry, Everett, Austin Teaching Fellow Floyd. 160 hours.

Materia Medica and Therapeutics. — Professor E. C. Briggs. 32 hours.

Dental Pathology. — Professor C. A. Brackett. 32 hours.

Neurology. — Instructor Taylor. 4 hours.

Crown and Bridge Work. — Assistant Professor Cooke, Instructors Eldred and Estabrooks, Assistant Hovestadt. 128 hours.

Prosthetic Dentistry and Orthodontia, Seniors. — Professor E. H. Smith. 32 hours.

Prosthetic Dentistry and Orthodontia, Juniors. — Instructor Baker. 10 hours.

Orthodontia. — Professor E. H. Smith, Instructors Baker and Howe. 192 hours.

Prosthetic Dentistry. — Clinical Instructor Dickinson. 16 hours.

Prosthetic Dentistry, Laboratory, Seniors. — Lecturer Cross, Instructors Hayden, Haley, L. A. Rogers, Chute, Clarke, Weston, Langley, Assistants Kazanjian and Miner. 496 hours.

Prosthetic Dentistry, Laboratory, Juniors. — Lecturer Cross, Instructors Davis, Dort, Eames, Furbish, Assistants Kazanjian, Peters, and Beckford. 544 hours.



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Anatomical Articulation, Mechanical Treatment of Fractured Jaws, Cleft Palate, and other Deformities. — Lecturer Cross. 21 hours.

Extracting and Anaesthesia. — Instructors Farrington, Squarebrigs, O'Brien, Stone, Tishler, Assistant Midgley. 477 hours.

Porcelain Inlay Work and Carving Teeth. — Instructors Hadley and Moffatt. 142 hours.

Operative Dentistry, Seniors. — Professor Potter. 32 hours.

Operative Dentistry, Juniors. — Lecturer Dill. 32 hours.

Operative Dentistry, Infirmary, Seniors. — Demonstrator Wyman, Instructors Blaisdell, Furfey, Paul, Stanley, and Elliott. 624 hours.

Operative Dentistry, Infirmary, Juniors. — Demonstrator Wyman, Lecturer Dill, Instructors Littig, Whitehill, Pike, Assistants Stevens and Whitchurch. 403 hours.

Operative Dentistry, Samaritan Hospital. — Instructor Rogers. 32 hours.

Oral Surgery and Roentgenology. — Instructor Shuman. 6 hours.

Oral Surgery. — Instructors Shuman and L. M. S. Miner. 64 hours.

Syphilis. — Instructor C. Morton Smith. 6 lectures and clinics.

Surgical Pathology and Surgery. — Lecturer Monks, 11 lectures and demonstrations; Instructor Blake, 9 clinics at City Hospital.

The work of the School is shown in the following tables: —

OPERATIVE DEPARTMENT

| | |
|---|---|
| No. of patients treated | 6,495 |
| " treatments of teeth and gums | 1,661 |
| " sets of teeth cleansed | 725 |
| " operations | 12,983 |
| " fillings — gold | 1,445 |
| " " amalgam | 1,736 |
| " " cement | 512 |
| " " gutta percha | 1,833 |
| " " enamel | 328 |
| " " combinations | 51 |

Surgical Clinics

| | |
|---|---|
| No. of cases of alveolar cysts | 9 |
| " " alveolar abscess | 12 |
| " " epulis | 6 |
| " " osteoma | 2 |
| " " non-erupted teeth | 4 |
| " " removal of cicatricial tissue | 2 |
| " " necrosis | 19 |
| " " septic sockets | 3 |
| " " impacted lower third molars | 5 |
| " " periostitis | 2 |
| " " resection of superior maxilla | 3 |
| " " stomatitis (ulcerosa) | 1 |
| " " post-extraction adenitis | 4 |
| " " neuralgia | 2 |
| " " empyema (antrum) | 26 |

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## PROSTHETIC DEPARTMENT

### Service to Patients

| | |
|---|---|
| No. of sets of artificial teeth | 151 |
| " " " " repaired | 106 |
| " partial sets of artificial teeth | 112 |

### Practice Work

| | |
|---|---|
| No. of specimen plates | 137 |

## INLAY WORK

### Service to Patients

| | |
|---|---|
| No. of porcelain inlays | 83 |
| " gold inlays | 23 |
| " porcelain tips | 7 |
| " gold tips | 7 |

### Practice Work

| | |
|---|---|
| No. of porcelain inlays | 33 |

## FRACTURED JAWS

### Service to Patients

| | |
|---|---|
| No. of cases | 41 |
| " appliances | 21 |

## ARTIFICIAL PALATES

### Service to Patients

| | |
|---|---|
| No. of cleft palates | 8 |
| " obturators | 3 |
| " cleft palate appliances | 9 |
| " artificial noses | 1 |

## ORTHODONTIA

### Service to Patients

| | |
|---|---|
| No. of patients treated for irregularities of the teeth | 79 |
| " appliances | 129 |
| " articulated models of regulating cases | 99 |

### Practice Work

| | |
|---|---|
| No. of articulated models of regulating cases | 20 |
| " appliances | 60 |

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## CROWN AND BRIDGE WORK

### Service to Patients

| | |
|---|---|
| No. of crowns and caps | 141 |
| " crowns repaired | 33 |
| " pieces of bridge work | 54 |
| " " " repaired | 18 |

### Practice Work

| | |
|---|---|
| No. of crowns and caps | 79 |
| " bridges | 57 |
| " carved teeth models | 4 |

On Saturday afternoons in January, February, and March, 1908, special lectures and clinical instruction were given to third-year students as follows: —

| | |
|---|---|
| Dr. Frederick S. Belyea. | Facial restoration by the use of plumpers on artificial dentures. |
| Dr. Sebert E. Davenport, New York. | The odds and ends of daily practice. |
| Dr. Henry W. Gillett, New York. | Pyorrhea. |
| Dr. Henry F. Hamilton. | Porcelain Inlays and Crowns. |
| Dr. H. Winchester Hardy. | Devitalization of an unexposed pulp by pressure anaesthesia without the use of a syringe. |
| Dr. Gurdon R. MacKay. | Contour Gold Filling in upper bi-cuspid. |
| Dr. Herbert L. Wheeler, New York. | Combination fillings. |
| Dr. Coleman Tousey. | Comparative Dental Anatomy. |

### Summer School

The Summer School was attended by fourteen men: three from Massachusetts, three from New York, four from Pennsylvania, one from Maryland, one from Rhode Island, one from Maine, and one from Austria.

Instruction was given as follows: —

Orthodontia. — Professor E. H. Smith, 1 lecture; Instructor Baker, 1 lecture.

Anatomical Articulation, Maxillary Fractures, Artificial Palates, and Prosthetic Work. — Lecturer Cross, lectures and demonstrations, 10 hours.

Porcelain and Gold Inlays. — Instructor Hadley, clinical demonstrations, 9 hours; Assistant Hovestadt, clinics and demonstrations, 8 hours.

Porcelain Crowns. — Instructor Stanley, demonstrations, 1 hour.

Carving Teeth. — Instructor Moffatt, demonstrations, 4 hours.

Crown and Bridge Work. — Assistant Professor Cooke, lectures and clinics, 2 hours; Instructor Estabrooks, demonstrations, 12 hours.

Operative Dentistry. — Instructor Stanley, lecture, 1 hour; Instructor Elliott, lectures and clinics, 2 hours; Instructor Blaisdell, clinics and demonstrations, 4 hours.

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Extracting and Anaesthesia. — Professor POTTER, clinics, 2 hours; Instructor SQUAREBRIGS, clinics, 4 hours.
Materia Medica. — Professor BRIGGS, lecture, 1 hour.
Dental Chemistry. — Lecturer SMITH, lecture, 2 hours. Also a course in General Chemistry and Qualitative Analysis, 175 hours.
Neurology. — Instructor TAYLOR, lecture, 1 hour.
Oral Surgery. — Instructor SHUMAN, clinic, 2 hours.
Syphilis. — Instructor C. MORTON SMITH, lectures and clinics, 4 hours.

In addition to the above, special conferences were held at the private offices of the following named men: —

Professors Eugene H. Smith and W. H. Potter, Drs. Harry F. Hamilton and H. Winchester Hardy.

Professor Potter has given the following addresses during the year: —

The Teeth in their Relation to Tuberculosis. At the Day Camp for Consumptives, Mattapan.
The Teeth and their Care. At the Lincoln Grammar School, Brookline.
The Teeth of Public School Children; How can They be Improved? Before the New York Institute of Stomatology.
The Hygiene of the Teeth and Mouth. At the Comins Evening School, Roxbury.
The Value and Use of the Teeth. Before the Jewish Anti-Tuberculosis Society, Boston.
Some Things about the Sterilization of Instruments. Lowell Dental Society.
The Value and Use of the Teeth. At the Parents' Meeting, Heath Grammar School, Brookline.
The Causes of the Decay of the Teeth and how to Prevent it. South Bay Union, Boston.
The Value of the Teeth, How to Prevent their Loss, and the Part They Play in the Problem of Tuberculosis. In the Read Fund Lecture Course, Salem.

Professor E. C. Briggs read a paper on "Interstitial Gingivitis" before the section on Stomatology of the American Medical Association at Chicago.

Dr. Lawrence W. Baker read a paper, illustrated with lantern slides, before the American Academy of Dental Science, on "Dental Caries as a Factor in the Etiology of Other Diseases." Published in the Boston Medical and Surgical Journal, 1908, Vol. 158, No. 13, p. 401.

The plates illustrating this paper were later used in the public exhibition of the Society for the Relief and Control of Tuberculosis. Duplicate plates were also made and are being used in the various exhibits of the Oral and Dental Hygiene Council of Massachusetts.

Dr. Baker has made investigations into the relations of oral sepsis to enlarged tonsils, adenoids, and the enlargement of the cervical glands; and also into the relations of the diseases of the teeth to general disease.

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Dr. Cross has given lectures and clinics on "Prosthetic Restoration and the Use of Anatomical Articulation in General Prosthetics" before the following societies: First District Dental Society, New York City; National Dental Association, Boston; Northeastern Dental Association, Hartford, Conn.

H. Carlton Smith, Ph.G., has continued his investigation of normal and abnormal saliva with a view to determining its influence in producing dental caries and general pathological conditions of the mucous membrane of the mouth. He has also developed a method for determining the degree of alkalinity in the saliva.

The most important work, however, that Mr. Smith has done this year, has been his work on the oxidizing enzymes which was demonstrated at the annual meeting of the National Dental Association in Boston in July.

The year has been a memorable one for the School. During the year the Faculty of Medicine advanced the sum of $80,000 for the use of the School in the erecting and equipment of a new building. The moral support given the School by this generous act of the Faculty of Medicine enabled the committee in charge to raise an additional sum sufficient to pay for the cost of building, and in August last the Corporation awarded the contract. The building is now in process of construction on the Dental School site at the corner of Longwood Avenue and Wigglesworth Street, adjoining the Medical School. It faces Longwood Avenue and has a frontage of 77 feet and extends back on Wigglesworth Street 172 feet. It will be equipped for hospital purposes only and provide for a maximum number of 250 students. It will be connected by subway with the buildings of the Harvard Medical School where all of the lectures will be given. The contract calls for its completion by the middle of August, 1909, and we hope to begin the use of it next October.

The Alumni have always given splendid support to the School. This service and devotedness have steadily grown from year to year until at the Alumni Dinner last June the members present pledged to the Dental School, on or before the 1st of July, 1909, the sum of $30,000. Part of this sum has already been paid and payments are constantly being made. In addition to this, graduates who were not present at the Dinner are sending pledges which are considerably swelling the amount, and we hope that ere the building is completed all of our graduates will be enrolled in the Alumni List of Contributors to the Building Fund and Endowment for Research.

EUGENE H. SMITH, *Dean.*

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# THE LIBRARY

To the President of the University: —

Sir, — I beg to submit this, my eleventh annual report on the Library, covering the year 1907–08.

In my last report I described in some detail the two-story addition built along the north side of the east stack in the spring and summer of 1907. None of the rooms in this addition, except the Delivery Room, were actually in use at the time of writing, but since then they have all been occupied to the great satisfaction of the members of the staff and to the convenience of students and readers. The Shelf Department and six members of the Catalogue Department moved into their new rooms in January. The furnishing of the Map Room and Treasure Room was not complete until March, but by the end of that month the maps and atlases had been collected from their scattered cases and had been disposed in their new quarters, and the rare books, — those that are properly kept under lock and key — had been brought together from their separate cupboards in all parts of the building, and had been arranged in the floor cases and in the sliding cases of the Treasure Room. These latter cases, designed to store compactly and safely a large number of volumes, have excited much interest among librarians and will undoubtedly lead to the installation of similar cases in other libraries. As I mentioned in my report last year, we are indebted to the Library of Bowdoin College for the first example, so far as I am aware, of bookcases built on this principle.

We have as yet no proper exhibition case in the Treasure Room, where interesting books and manuscripts might be displayed under glass. But the room could advantageously be used for this purpose; even now to visitors it is naturally the chief point of interest in the Library, since through the glass doors of its cases are to be seen books from the libraries of Charles Sumner, Charles Eliot Norton, James Russell Lowell, Ferdinand Bôcher, Count Paul Riant, John Bartlett, George Ware Wales, and Thomas Carlyle; books given to the Library by Thomas Hollis, Benjamin Franklin, Goethe, the German Emperor, and other distinguished donors; early editions of English literature, and classical manuscripts and facsimiles. It would be easy to maintain here exhibits, changing from time to



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time, comprising some of the more strikingly interesting volumes from among the Library's treasures, yet the original purpose of the room was to provide a place where books which have to be specially protected could be conveniently and safely used by scholars, and this implies the necessity of quiet and of freedom from interruption. An exhibition-room cannot be a quiet place for study; a room for study cannot admit chance visitors and sightseers. For the present, we have done our best to provide for these opposite uses of the same room by maintaining, so far as possible, the quiet and privacy of the room in the morning, but admitting visitors sparingly in the afternoon. The room is open and an attendant is present from 10 A.M. to 5 P.M. Strangers who wish to visit the room must apply at the reference desk in the Delivery Room for a card of admission. Officers of the University are at liberty to use the room at all times for their work; while students use the room only when engaged upon the study of books which are kept here.

The Class Room at the north end of the addition was designed to provide a meeting place for small classes of advanced students whose work requires the presence in the class room of a considerable number of volumes collected from the Library shelves. The question was raised, however, at the beginning of the year, whether it were not better to devote this room entirely to the use of officers of the University, thus giving them a quiet and private working-place where they might keep their books and papers undisturbed, and might work without being subject to interruption by the meetings of classes. The subject was discussed carefully by the Library Council; but, while the importance of having convenient workrooms in the Library for the special use of professors and other teachers was fully recognized, it was decided to meet this need, so far as we could for the present, by means of the Map Room and the Treasure Room, and to permit classes still to meet in the Class Room, confining their occupation of the room, when possible, to distinct parts of the day, so as to leave it free at other times for individual work.

The equipment of the new rooms having been completed, it remained to carry out such changes in the old part of the Library as could profitably be made in connection with the redistribution of space and of service. Part of this work was done in the spring, part of it was postponed until summer, but the whole is now completed, and the increased convenience and improvement is almost as great as that which resulted from the addition itself. As matter of record, I set down the several points. The smaller Reading-Room, — that devoted to American history, — has been rearranged and

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re-decorated. The windows on the north side of the room having been blocked by the addition, and the space being now available for shelving, it became desirable to run the lines of tables at right angles to their former position and to place the tables for Radcliffe readers on the east side of the room instead of along the north side. These latter tables are now separated from the rest of the room by a long counter, which formerly stood against the wall. The twenty or more lights suspended from the high ceiling by as many single cords have been swept away, and their places have been supplied by table fixtures and by a single powerful tungsten lamp high up under the ceiling. The improvement in the appearance of the room and in its attractiveness to readers is remarkable.

On the third floor of the east stack, readers' tables have taken the place of the map-cases which stood between the piers on the south side. This more than makes up for the darkening of the other side of the stack where alone table space was formerly available. The new tables can be doubled in number when more are needed. Rolling shades give necessary protection from the brightness of the adjacent skylight.

On the second floor of the east stack, a number of wooden closets and cupboards, which in the course of thirty years had been built in from time to time to meet successive demands for additional space, have all been torn out and have relieved us of a large amount of inflammable material which was always a source of some anxiety. A change here in the partition between the stack and the old Collating Room (now the Librarian's outer office) gives well lighted table space for several readers in proximity to the Classical shelves on one side, and at the same time improves the light and air in the office on the other side. A re-arrangement of cases, shelving, and desks in this outer office makes it far better adapted to its use than ever before, and gives what may at least be described as a less awkward and crowded approach to the Librarian's Office.

All the work-rooms on this floor have been freshened by a new coat of paint. The additional shelving which in process of time had crystallized, as it were, about the piers and encroached on the passageways, has been rebuilt in more uniform fashion, so that it neither offends the eye nor blocks the passage. The reference books in these rooms and in these pier cases have been subjected to a salutary weeding process, and have been re-classified on a simpler and more practical plan, and in such a way as to bring those which are in constant use by the ordering department into the same room with the members of that department, instead of at the farthest

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possible point. The catalogue cases that hold the Library of Congress titles have been removed from their former place, where they displaced regular stack shelving and made an adjoining table unavailable for stack readers, to a place between piers on the south side where, it is true, they cut off some light from two or three passageways in the stack, but where they are more accessible to cataloguers.

In the basement, under the staff rooms and the librarian's offices, substantial improvements have been made. A re-distribution of the space has given us a welcome addition to the shelving for the pamphlet files, with an alcove where the work of arranging and distributing pamphlets can be conducted, and also a lunch- and rest-room for the ladies of the staff. This room fortunately could be so contrived that the already existing stairway from the ladies' work-rooms should afford an entrance, and while it is contiguous to the ladies' toilet-room, it is entirely distinct from it. Although a basement room, it is flooded with sunshine in winter. Its equipment consists of a long seat (which may be used as a couch), a broad table, a counter along one end of the room upon which are three electric heaters with saucepans and tea-kettles, a pantry-sink with hot and cold water, a china closet with a modest outfit of glass, china, and plated ware, drawers for towels, napkins, etc., and a series of tin cake-closets where individuals may keep supplies without furnishing an attraction for rats and mice, who are most undesirable visitors in a library. The expense of furnishing the room was borne by Mr. Howard Payson Arnold, '52, of Pasadena, California, who has for many years been a warm friend and frequent donor to both the College Library and the Harvard Union.

The improvement in the lighting of the small reading-room led to an examination of the lighting of the great reading-room, which was found to have certain fundamental faults that could be easily remedied. The general lighting of the room had been ineffective from the beginning, and with the introduction of additional shelving not originally contemplated, it had become necessary to supplement it by turning upside down a number of the table fixtures in such a way as to shed light on the new shelves. This process finally resulted in our having some fifty or more unshaded 16-candle-power lights scattered along the four walls of the room in such a way as to be extremely trying to the eyes. These have been replaced by eighteen 20-candle-power tungsten lamps, which give a more satisfactory illumination, are not disagreeable to readers in other parts

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of the room, and consume less than a third of the current required for the lamps which they displace. Three hanging lamps of the same kind take the place of twelve 16-candle-power carbon lamps over the three tables in the periodical alcove. These give a pleasanter light to read by and also relieve the tables of the encumbrance of light-fixtures. The lighting of the long tables for readers admitted of improvement likewise. Hitherto the lamps, with their green glass shades, had been directly in front of the reader, and being raised twelve inches or more above his head, their shade did not keep the light from his eyes. The lamp was an ordinary 16-candle-power carbon lamp with clear bulb, which threw a ragged and confusing star of light and shade on the table just where a reader's book or paper would naturally lie. The fact that this arrangement was considered satisfactory some fifteen years ago, when these lights were installed, illustrates the progress that has been made in electric lighting. By placing the arms of the brass standards at an acute angle with the axis of the table, instead of at right angles, the light has been carried to the reader's left and nearer to the centre of the table, so that it occupies the proper position not to be reflected by the pages of his book into his eyes. The lamp has been lowered so that the shade fulfils its purpose, and a 12-candle-power tantalum bulb has been introduced, which gives a less powerful but a clearer light, and burns less than half the current consumed by the other. The result gives general satisfaction, and we anticipate a substantial saving in running expense.

Another change has been made in the reading-room which will contribute to efficient administration. The attendant's desk was formerly at some distance from the head of the stairs, and the adjoining counter, where specially reserved books were handed out, was short and the space behind it cramped. A new delivery counter, extending from the old site as far as the head of the stairs, brings the attendant's desk where it should be, namely, at the point where everyone going in or out must pass directly before it, and gives ample room for handling reserved books and serving readers expeditiously and without confusion. I anticipate a marked improvement in the administration of the room, and some decline in the unauthorized carrying off of books from the open shelves, — a practice which has never increased to an alarming extent, but has nevertheless been a constant source of annoyance to both attendants and readers. The new counter naturally occupies more floor-space than the old and encroaches a little upon the tables, three of which

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have had to be shortened, but the net loss in seats has been only seven. We now have in the great reading-room, 170 chairs at the ordinary tables, 18 at the three open tables in front of the delivery counter, and 18 at the tables in the periodical alcove; in the small reading-room (American History), we have 34 chairs, beside 10 for Radcliffe students; and in the Treasure Room, which, like the small reading-room, opens out of the great one, there are 19 seats, making in all 269 available for readers. In the small room, all the seats are well lighted at night; in the great room, only 123 of the 170 seats at the ordinary tables have lights, but the 36 chairs at the open tables are well lighted from above, and the 47 others at the long tables can be furnished with lights whenever they are needed.

The addition of 1907 was planned as part of a possible series of enlargements of the present Library which should result in a great building adequate to the needs of the University for many years to come. It is certain that this addition is in its outward appearance the best looking part of the building; its façade is distinctly superior to the façade which it hides, and Professor Warren's plans aim similarly to mask a great part, but not the whole, of the old Gore Hall, and to produce a building harmonious with the façade lately constructed. These plans, it should be stated, are simply Professor Warren's contribution to the study of the problem, and the whole question as to the best course for the development of the Library to take is still an open one. At the request of the Corporation, these plans were studied with some care by the Committee of Department Librarians (under Professor E. C. Pickering's chairmanship) which had reported in print in 1902 on the needs of the Library and the specific requirements for a new building. This Committee presented a report in May, 1908, in which it examined not only the solution of the problem embodied in Professor Warren's plans, but also the alternatives of erecting a new building on the same or on a different site or of erecting a separate or partially separate building to be used in conjunction with the present Library. The suggestion was also made that it might be practicable to build a new building in the form of a large hollow square or parallelogram, the interior court to form a great hall for Commencement and other academic gatherings.

The experience gained in constructing the addition and the study of the larger plans have at least made it clear that it is perfectly possible to produce a reasonably satisfactory library building, combining architectural distinction, large storage capacity, and

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convenient interior arrangement, by making successive additions to the present edifice. Some sections of the enlarged building, it may be noted, would be of moderate extent and could be built for a moderate sum; others, such as the section containing a new general reading-room, would be very costly. It is also clear that the next addition to the building, now that administrative needs have been provided for in the addition of 1907, should be a section devoted largely to shelving in stack form, but containing also some rooms suitable for certain special collections, such as art books, the College archives and the "H. U." collection, and newspapers. A better reading room than our present one we may well look forward to, but the need of increased storage capacity takes precedence of all other needs.

Two new book-funds have been added to the permanent resources of the Library. One, mentioned in the Treasurer's report last year, is the William R. Castle fund of $1,000, the gift of William R. Castle of Honolulu, "the income to be used, first, for the purchase of books on the Hawaiian or Sandwich Islands, and second, for additions to the English department of the Library." The other is the Francis Parkman Memorial Fund of about $6,000, "the income of which is to be used for the purchase of books relating to Canada, with the object of building up in the Library a Parkman Memorial collection relating to Canadian history." The fund represents the unexpended balance remaining in the hands of the Parkman Memorial Committee after erecting the memorial to secure which the committee was constituted, which balance the Committee was authorized by the Supreme Judicial Court of Massachusetts to pay over to the College for the purpose specified.

The accessions to the libraries of the University for the year, and the present extent of each are shown in the table on the next page.

The total number of volumes received has only twice been exceeded in the history of the Library, namely in 1899–1900, when the Riant library was received, and in 1903–04, when Von Maurer's library came to us. The total accessions to all the libraries of the University has only once been exceeded, — in 1905–06, when our own acquisitions were almost as numerous as during the last year, and when the additions to the libraries of the Law School and of the Arnold Arboretum were unusually large.

The map collection in the College Library contains about 27,450 sheets, and is not included in the above enumeration.

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| Accessions. | Volumes added. | Present extent in | |
|---|---|---|---|
| | | Volumes. | Pamphlets. |
| Gore Hall (College Library) | *18,716 | 496,256 | 343,112 |
| Law School | 6,185 | 109,011 | 12,002 |
| Divinity School | 623 | 36,956 | 10,351 |
| Medical School | 779 | 14,166 | 25,529 |
| Dental School | 284 | 1,270 | 10,000 |
| Bussey Institution | 71 | 4,671 | 17,000 |
| Museum of Zoölogy | 1,040 | 44,558 | 40,266 |
| Peabody Museum | 62 | 3,717 | 3,188 |
| Astronomical Observatory | 346 | 12,544 | 26,278 |
| Gray Herbarium | 368 | 10,760 | 8,884 |
| Arnold Arboretum | 2,503 | 18,501 | . . |
| Thirty-two Special Reference Libraries | 4,625 | 51,360 | . . |
| Total | 35,602 | | |
| Deduct, transfers between Gore Hall and Department Libraries | 347 | | |
| Totals | 35,255 | 803,770 | 496,610 |

The additions to the College Library for the last five years have been as follows: —

| Additions to College Library. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|
| Volumes by purchase or exchange | 7,870 | 7,746 | 11,012 | 7,520 | 8,765 |
| Do. by binding serials | 1,312 | 1,760 | 1,767 | 1,478 | 1,699 |
| Do. by binding pamphlets | 1,104 | 1,098 | 943 | 852 | 1,099 |
| Do. by gift | 12,009 | 6,031 | 4,350 | 4,852 | 7,153 |
| Total volumes added | 22,295 | 16,635 | 18,072 | 14,702 | 18,716 |
| Maps in sheets | 354 | 2,001 | 1,112 | 512 | 699 |
| Pamphlets by purchase or exchange | 1,217 | 1,193 | 2,829 | 1,899 | 2,010 |
| Do. by gift | 14,259 | 14,951 | 14,404 | 14,128 | 14,872 |
| Total gifts (vols. and pams.) | 26,268 | 20,982 | 18,754 | 18,980 | 22,025 |

* Not including the 8,000 or more volumes to be added from the Bowie library given by Mrs. E. D. Brandegee as a memorial to her grandfather, William F. Weld. These volumes were actually in the possession of the Library during the summer of 1908, when they were being checked off and arranged in the basement of Hastings Hall, but they were not formally turned over to the Corporation until November 9, 1908, so that they will figure among the accessions of 1908–09. I therefore postpone any further description of them until my next report.

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Dr. Storer, Curator of Coins, reports 1,416 accessions to the coin and medal collection. Of these, 123, including a very rare "Granby token," were from the estate of Dr. D. H. Storer. The Massachusetts Historical Society and the American Antiquarian Society, adopting a well-considered policy not to maintain a coin cabinet except as it should illustrate American history, made over to us, the one, 865 ancient coins, and the other, 2,972 pieces of various kinds which were clearly outside the scope of their collections. Of these, 1,272 proved to be new additions to our collection, while the remaining 2,575 were duplicates. Mr. H. M. Ballou, '92, has presented 143 coins, of which 114 were duplicates. Dr. D. A. Sargent has given us a copy of the Sargent medal, and from H. R. H. the Duke of the Abruzzi we have received one of the silver medals commemorating his North Polar expedition.

The Library is again indebted, as so often in the past, to many generous friends for gifts, both of books and money. Those who have undertaken to promote the growth of some single subject by an annual gift repeated for a number of years have continued their donations: Mr. Lawrence S. Butler, '98, of New York, for books on Paris; Mr. Harold J. Coolidge, '92, of Boston, for books on China; Mr. Ellis L. Dresel, '87, of Boston, for German drama; Mr. James Loeb, '88, of New York, for labor periodicals; Mr. Edward S. Mullins, '93, of Hyannisport, for books on Folklore; Mrs. George A. Nickerson, of Dedham, for books on Folklore; Mr. Horace B. Stanton, 1900, of Boston, for Molière.

Miss Hester Bancroft has given $500 for books on Japan, in memory of her father, John Chandler Bancroft, '54, and in continuation of earlier gifts for the same purpose received from the late Mrs. J. C. Bancroft.

Professor A. C. Coolidge, '87, has continued to add generously to the Library's collections on German history, French history, India, Morocco, etc.

Mr. James Freeman Curtis, '99, of Boston, has given $100 to be spent on books relating to the Western States.

From the family and friends of the late Arthur Sturgis Dixey, '02, who was president of the Cercle Français while in College and was an eager student and lover of French literature, the Library has received the sum of $1,500 to purchase, as a memorial to him, books on French literature. The conditions of the gift are that the money must be spent within five years, and that current fiction and drama, and works of a grammatical or philological nature, are to be excluded. A memorial book-plate, designed by Mrs. Richard F. Dixey, accom

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panies the gift. The Library has been fortunate in being already able to acquire a number of early editions of French authors from a French collector, and it has also taken advantage of an opportunity to purchase a large number of works relating to Rousseau.

From Mr. Frank G. Thomson, '97, of Philadelphia, the Library has received $200 to be spent for books on English literature.

Professor Kittredge and Mr. Edgar H. Wells have each added to their former gifts: the first, for books relating to the history of witchcraft; the second, for books on English literature.

Messrs. William C. Sanger, '74, of Sangerville, N.Y., and Francis R. Appleton, '75, of New York City, united in buying for the Library an interesting little manuscript relating to College affairs which was offered for sale. It contains an account of a college debating society in 1722, and the successive numbers of a college paper entitled "Telltale," which was circulated in manuscript in 1721. The writer of the manuscript was Ebenezer Turell, of the Class of 1721, afterwards well known as minister of the church in Medford.

Messrs. A. T. Lyman, '53, Thomas P. Beal, '69, and Robert Winsor, '80, all of Boston, contributed to a gift to be used for books on Banking.

From anonymous donors, we received gifts for the purchase of books to be added to the John Lothrop Motley Collection on Dutch history; books that are known to have formed part of John Harvard's library; books on the linguistics of Oceania; and books on Algiers.

In the course of the year, a copy of the very rare engraving of Harvard College, made by Paul Revere about 1775, was offered for sale at auction in Boston, and seven friends of the Library, — Francis R. Appleton, '75; James B. Ayer, '69; Ezra H. Baker, '81; Henry W. Cunningham, '82; William Endicott, Jr., '87; Frederick L. Gay, '78; and Grenville H. Norcross, '75, — united to secure the print for the Library, and in this they were happily successful.

A more detailed account of the gifts of money received will be found in the pages of the Treasurer's report.

Among the gifts of the year, by far the largest is that of the library collected by Richard Ashurst Bowie, of Philadelphia, which is given to us by Mrs. E. D. Brandegee, of Brookline, as a memorial to her grandfather, William F. Weld. Inasmuch as the formal transfer of the books did not take place until November, I postpone any detailed description of it until next year, when it can be described more accurately.

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Professor Norton continued to make additions to his collection in the College Library almost up to the time of his death, 857 volumes and 167 pamphlets being received during the year under review.

From Messrs. Frederick L. Gay, '78, and Ernest L. Gay, '97, of Boston, we received about three hundred volumes from the library of their mother, Mrs. Elizabeth C. Gay, containing among others, many valuable illustrated works and a number of books on numismatics. Many of them had belonged to her father, Dr. Winslow Lewis, '19. Mr. Ernest L. Gay added to this gift over a hundred volumes and pamphlets from his own library, mostly works relating to Napoleon and English literature.

From Mrs. Gustavus Hay, the Library has received a collection of mathematical books from the library of her late husband, who was of the Class of 1850.

Mr. H. Nelson Gay, of Rome, Curator of Modern Italian History, has continued his gifts of books on the Italian Risorgimento period, and has spent for us in Italy the appropriation made by the Council for the same subject.

Dr. Hiram Bingham, Jr., Curator of South American History, has added to his former gifts on South America books collected by him in that country two years ago.

Over 250 volumes on Swiss history, in continuation of his former valuable gifts on the same subject, have been received from Mr. W. Bayard Cutting, Jr., 1900, who has lately been appointed Curator of Napoleonic Literature, and who intends for the future to help enrich the Library's collections relating to Napoleon.

To Mr. F. E. Chase, '76, of Boston, we are indebted for over 300 volumes of dramatic literature, including several of the older printed collections of plays.

From Dr. Charles D. Tenney, who has long been officially connected with the administration of education in China, we have received nearly 300 volumes in Chinese.

From the library of J. T. Stickney, '95, who died in 1904, the Library received some 75 volumes, mainly Classical works, besides a number of other volumes placed in the library of the Classical Department.

Mr. J. Pierpont Morgan has generously sent us the magnificent catalogues of his collections: Manuscripts and early printed books, 4 volumes; Pictures, 4 volumes; and Miniatures, 3 volumes.

Mr. J. Pierpont Morgan, Jr., '89, sent us an interesting early manuscript which fell into his hands, containing notes on lectures

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by Tutor Flynt, whose services in the College extended from 1699 to 1760, and whose manuscript diary has long been in the College Archives.

From His Imperial Majesty the German Emperor the Library received, in the fall of 1907, a large-paper copy of the Works of Frederick the Great, in thirty-three volumes, a gift intended to express His Majesty's satisfaction with the exchange of German professors lately inaugurated. To this gift the Prussian Ministry of Spiritual, Educational, and Medical Affairs added a volume of Menzel's paintings and studies, Menzel's illustrations of the uniforms of Frederick the Great's army, and two volumes on the exhibition of German art in the National Galleries at Berlin.

From Mr. F. W. Story, '73, of Baltimore, the Library has received a precious volume of early sermons of the eighteenth century, prefixed to which is a pamphlet of the greatest rarity; namely, Cotton Mather's "Poem dedicated to the memory of Mr. Urian Oakes, President of Harvard College," printed in 1682. This is thought to be the earliest of Cotton Mather's publications, and was written when he was but nineteen years old. Only one other copy of it, now in the Harris Collection at Brown University, has ever come to light. The volume is presented to the Library by Mr. F. W. Story and his brother, Professor W. E. Story, '71, as a memorial of their father, Hon. Isaac Story, of Somerville.

Mrs. Mary Jane Lockwood has given, in memory of her brother, Philip Case Lockwood, his collection of photographs and autographs of more than six hundred generals of the Union Army in the Civil War. These interesting memorials, collected with great industry and perseverance by Mr. Lockwood, have been handsomely bound, and are provided with a useful index.

The titles of a number of the more notable books added to the Library during the year will be found in the appendix to this report as separately printed. Among the purchases are to be found many works on Australia; on India; on Folklore, especially alchemy and witchcraft; about one thousand volumes on French History; and some five hundred volumes added to the Hohenzollern Collection of German History. During the summer, many works on accounting and on the organization of business, and many trade periodicals were ordered at the request of the Dean of the new Graduate School of Business Administration. These were paid for by a special appropriation from the funds of the School, but they become the property of the Library.

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### DEPARTMENTAL LIBRARIES

This report makes no attempt to give any comprehensive account of the special libraries belonging to the several Departments of the University, but I note here such points as have been specifically reported to me or have otherwise come under my own observation.

The Peabody Museum has been able, through the generosity of friends, to make a modest addition to its metal shelving, to bind 177 volumes of unbound serials, and to secure the services of a regular library assistant. Almost all its current accessions are received through exchange or by gift, but Mr. John B. Stetson, '06, has offered to give a hundred dollars a year for five years to be spent for books. Assistant Professor R. B. Dixon, the librarian of the Museum, has completed a re-arrangement of the library, and a new shelf-list has been written.

The library of the Dental School is at present in storage awaiting the completion of the School's new building. The present collection of books has been built up almost exclusively from the gifts of friends and alumni. The librarian has taken special pains to gather dental periodicals, and to complete and bind the broken files already on his shelves. As a result, he has on hand many duplicate numbers which are available for sale or exchange. The School ought to be supplied with the best modern treatises on dentistry and anatomy, with standard works of reference, and with every current periodical on the subject which is worth reading, to procure which it is evident that a special library fund for the purchase and care of books is needed.

The Astronomical Observatory still lacks a fireproof building for its library, and the great collection of over 12,000 volumes on astronomy and meteorology is in constant danger of destruction. Under such unsafe conditions, a department library ought to be confined to the narrowest limits, and should comprise only the books of most frequent current use. In the present case, on the contrary, the library strives to be complete in the two subjects which it cultivates, and it contains long sets of periodicals and of annual reports and numerous early publications which would be most difficult to replace. The College Library, however, is not in a position to offer to shelve, even temporarily, any portion of the collection, and doubtless the officers of the Observatory, who have long been accustomed to having their library close at hand, would be put to

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much inconvenience by any change. A well equipped, fireproof building is, therefore, greatly to be desired at the earliest possible moment.

The libraries of the Medical School, which were reorganized by Mr. Heald of the College Library staff in 1906–07, have been cared for, under the direction of the Library Committee of the Medical Faculty, by Miss I. F. Underhill. Medical dissertations received by the College Library from foreign libraries are transferred to the Medical School libraries or to the Boston Medical Library. A large number of other pamphlets and reprints are currently received there, but only a relatively small number of books are bought, ninety-five per cent. of the appropriation for books and periodicals being spent for periodicals.

The library of the Bussey Institution needs a thorough overhauling. For many years it has been crowded into painfully insufficient quarters, and but little money or service has been available for its care. In the spring, Mr. C. H. Paige, acting secretary of the Institution, consulted me in regard to the library's condition, and Mr. Heald visited the library and reported on it. It is evident that a large number of unnecessary and out-of-date books might be weeded out, but even if this were done, the library would soon be as badly crowded as ever, if it is to receive in the future the attention it deserves. For many years it has not had means adequate for the systematic purchase of books, and it consequently lacks most of the important modern works. The increase simply of periodicals and of experiment station publications, of which the library should have a full set, would probably soon occupy the space now devoted to the library. Until more space were provided, Mr. Paige rightly felt that he could do little beyond completing serial files, bringing up the binding, and setting in operation a business-like system of recording the receipt of current issues, and on this he was engaged when he left the service of the Institution.

It is a pity that the College Library is not well enough provided with experienced assistants to detail from time to time one or more of them to reorganize a library of this kind and bring it up into efficient condition. It has been the desire of the College Library, since the beginning of Mr. Winsor's administration more than thirty years ago, to serve all the department libraries as a central agency for purchase and record, so that unnecessary duplication may be avoided, the catalogue of the central library may contain a complete record of all the books belonging to the University, and some useful

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degree of uniformity may be introduced in forms and methods. This policy was formally approved by vote of the Corporation, but the Library has never attained to its ideal in any of these respects. During the last few years, under pressure of greatly increased accessions, we have had to be content with accomplishing even less than formerly. It is quite true that none of the ends mentioned could under the most favorable circumstances be completely attained. To prevent *all* duplication is impracticable and undesirable; to make an entirely complete central card catalogue is unnecessary, when some departments are on the point of issuing separate printed catalogues of their own; to introduce absolute uniformity is impossible; yet each of these objects can be pursued up to a certain point, to the manifest advantage of the institution as a whole, and it will be a misfortune if we are compelled to neglect this aspect of the College Library's relation to the departmental libraries.

### SPECIAL REFERENCE LIBRARIES

These libraries, being intended to serve the special needs of various groups of students working under the Faculty of Arts and Sciences, bear a closer relation to the College Library than do the libraries of the professional schools and scientific establishments of the University. It is intended to conduct each in such a manner as to meet the special needs and desires of the department concerned. Some have librarians of their own and need little help from the central library; for others the College Library is more directly responsible.

Some investigation of the manner in which these libraries were being looked after from day to day showed that the work had not been conducted as efficiently and carefully as it should have been. The duty of inspecting and supervising the whole was, therefore, committed to Mr. Carney, since the greater part of the work is closely related to that of the Shelf Department in the College Library. Mr. Carney now has these libraries well in hand, and is taking up one collection after another, introducing better order and systematic methods, and seeing that these methods are carried out.

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The present extent of these libraries is as follows: —

| Special Reference Libraries. | Permanent. | On Deposit. | Totals. |
|---|---|---|---|
| 1. Chemical Lab. *Boylston Hall* | 2,449 | 1,078 | 3,527 |
| 2. Physical Lab. *Jefferson Phys. Lab.* | 219 | 45 | 264 |
| 3. Botanical Lab. *University Museum* | 492 | 121 | 613 |
| 4. Geological Lab. *Do.* | 158 | . . | 158 |
| 5. Mineralogical Lab. *Do.* | 565 | 139 | 704 |
| 6. Phys. Geography Lab. *Do.* | 349 | 69 | 418 |
| 7. Zoölogical Lab. *Do.* | 376 | . . | 376 |
| 8. Astronomical Lab. | 4 | . . | 4 |
| 9. Statistical Lab. *24 University Hall* | 93 | . . | 93 |
| 10. Physiological Lab. *Lawrence Hall* | 23 | . . | 23 |
| 11. Classics. *Harvard Hall 3* | 4,557 | 148 | 4,705 |
| 12. History. *Harvard Hall R. R.* | 3,526 | 17 | 3,543 |
| 13. United States History. *Harvard Hall R. R.* | 945 | 8 | 953 |
| 14. Political Economy. *Do.* | 1,471 | 21 | 1,492 |
| 15. Social Ethics. *Emerson Hall* | 2,455 | . . | 2,455 |
| 16. Child Memorial (English). *Warren House* | 4,676 | 90 | 4,766 |
| 17. Lowell Memorial (Romance). *Do.* | 1,592 | 6 | 1,598 |
| 18. German. *Do.* | 1,365 | . . | 1,365 |
| 19. French. *Do.* | 2,606 | . . | 2,606 |
| 20. Sanskrit. *Do.* | 985 | 31 | 1,016 |
| 21. Semitic. *Semitic Museum* | 1,632 | 5 | 1,637 |
| 22. Mathematics. *Sever 22* | 774 | 69 | 843 |
| 23. Mining and Metallurgy. *Rotch Laboratory* | 317 | 57 | 374 |
| 24. Engineering. *Pierce Hall* | 7,102 | 534 | 7,636 |
| 25. Music. *Holden Chapel* | 832 | . . | 832 |
| 26. Philosophy (Robbins Library and Psychol. Lab.). *Emerson Hall* | 3,136 | 44 | 3,180 |
| 27. Education. *Lawrence Hall* | 6,173 | . . | 6,173 |
| 28. Fine Arts (incl. Gray and Randall Coll.). *Fogg Museum* | 1,027 | 13 | 1,040 |
| 29. Architecture. *Robinson Hall* | 1,191 | 15 | 1,206 |
| 30. Preachers' Library. *Wadsworth House* | 95 | . . | 95 |
| 31. The Study. *Phillips Brooks House* | 80 | . . | 80 |
| 32. Social Service Committee. *Phillips Brooks House* | 93 | . . | 93 |
| Totals | 51,358 | 2,510 | 53,868 |

The total reported (51,358 volumes) is larger than last year's total by 4,483, but I am inclined to think that a part of this number should be credited to earlier years, a more careful enumeration of the volumes this fall having included some volumes which had probably escaped counting before.

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USE OF BOOKS IN THE COLLEGE LIBRARY

The following table shows the use of books at Gore Hall in 1907–08 as compared with previous years: —

| Use of Books. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|---|---|
| 1. Books lent . . . . . | 58,443 | 63,183 | 62,861 | 59,021 | 56,875 | 59,254 | 63,227 |
| 2. Used in the building . (Recorded use only.) | 22,583 | 24,924 | 23,111 | 26,565 | 26,558 | 24,351 | 21,396 |
| Total . . . . . | 81,026 | 88,107 | 85,972 | 85,586 | 83,433 | 83,605 | 84,623 |
| 3. Over-night use of Reference Books. | | | | | | | |
| Gore Hall . . . . . | | 386 | 3,990 | 6,485 | 5,662 | 6,107 | 5,117 |
| Harvard Hall . . . | 13,594 | 12,861 | 12,644 | 14,268 | 11,452 | 11,267 | 15,064 |

The increase in books lent, both last year and the year before, is probably due to the fact that more pains have been taken to place interesting books on the open shelves in the delivery-room. The better facilities at the delivery desk, and perhaps the fact that all books are put out for inspection in the reference room, would contribute to the same result. The decline in the number borrowed for use in the building naturally accompanies the increase in the number of persons admitted to the stack, as shown in the second table beyond.

At the request of the Committee on the Summer School, the reading-room in Harvard Hall was open during the continuance of the School from nine in the morning until half-past five in the afternoon, but not in the evening, as in the summer of 1907. The attendance through the day was somewhat larger than during the previous summer, and generally varied from twenty to seventy persons. In certain cases books were transferred from the reading-room in Gore Hall when classes could be more conveniently accommodated in Harvard Hall.

The books shelved in the reading-room, together with those in the various special reference libraries in Harvard Hall, Warren House, and elsewhere, amount altogether to over 79,000 volumes to which direct access can be had by all students to whom they are of value. In addition the library of the Harvard Union now offers to its members over 8,000 books, mainly literature, biography, history, travel, and sport.

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The extent of these open reading-room collections and their growth is shown in the following table: —

| Open Collections. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|
| Bound Periodicals | 3,341 | 3,516 | 3,288 | 3,354 | 3,604 |
| Reference Books | 4,645 | 4,685 | 4,800 | 4,904 | 4,803 |
| Reserved Books | 10,514 | 10,904 | 11,055 | 11,125 | 11,174 |
| U. S. Documents | 4,300 | 4,481 | 5,199 | 5,355 | 5,437 |
| Totals | 22,800 | 23,586 | 24,342 | 24,738 | 25,018 |

Cards of admission to different sections of the book-stack continue to be given, on recommendation of an instructor, to all advanced students who need to go directly to the shelves for purposes of investigation in connection with their work. Such students have the same facilities for the examination and study of all the resources of the Library, in their own departments, that the officers of instruction enjoy. The use of these cards of admission to the book-stack is shown in the following table: —

| Admission to the Book-Stack. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|---|---|---|
| History | 81 | 90 | 118 | 92 | 122 | 105 | 117 | 168 |
| Science | 36 | 37 | 45 | 38 | 28 | 36 | 36 | 48 |
| Art and Archaeology (including Music) | 33 | 55 | 46 | 42 | 57 | 28 | 47 | 40 |
| Literature | 74 | 80 | 125 | 144 | 107 | 131 | 129 | 169 |
| Classics | 58 | 70 | 73 | 62 | 57 | 58 | 50 | 53 |
| Philosophy | 22 | 27 | 31 | 22 | 18 | 11 | 12 | 17 |
| Theology | 1 | 14 | 2 | 9 | 8 | 13 | 6 | 10 |
| Economics and Sociology | 13 | 16 | 33 | 26 | 38 | 23 | 46 | 56 |
| Education | 7 | 4 | 25 | 10 | 11 | 9 | 9 | 11 |
| Geography | 9 | 15 | 6 | 7 | 5 | 3 | 8 | 2 |
| Publ. of Learned Societies | 16 | 8 | 7 | 6 | 5 | 1 | 1 | 3 |
| Total cards given* | 350 | 416 | 511 | 458 | 456 | 418 | 461 | 577 |
| Total individuals admitted* | 257 | 301 | 366 | 315 | 354 | 335 | 356 | 424 |
| Total times of use | 6,067 | 5,551 | 6,244 | 6,413 | 7,172 | 6,124 | 5,992 | 5,942 |

* The number of individuals admitted is less than the number of cards given out, because the same person often receives permission to use different parts of the book-stack.

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The number of persons admitted to the use of the book-stack last year was greater than ever before, and it will be necessary for officers of the University to be somewhat more careful in giving recommendations to their students, if the stack is not to become altogether too crowded. The 5,942 times of use, as noted, is probably considerably less than the actual number, since men who are in the habit of using the stack often forget to call for their card when they come to the Library, and in this way their visit fails to get recorded.

In the course of the year, besides the students of the Summer School, 86 professors and instructors from 52 different colleges came to Cambridge for purposes of study, and were made welcome in the Library. 1,236 volumes have been sent from the Library to 118 different colleges, schools, and public libraries, and in some cases to individuals residing at a distance. This is a somewhat smaller number of volumes, but a larger number of institutions, than was reported last year. Requests for the loan of books often have to be refused, sometimes because the book wanted is subject to too frequent demand in the Library, sometimes because it is thought unwise to expose it to the dangers of transportation. Only rarely are requests received which, on account of their comprehensive nature or by reason of the excessive amount of investigation required to satisfy them, seem to lie clearly outside the ordinary scope of inter-library lending. When kept within reasonable limits, these loans to distant scholars are one of the most important services which the Library can render to American scholarship.

Radcliffe College has borrowed 374 volumes for the use of its students, a much smaller number than last year. Radcliffe students also visit the Library, and tables are reserved for them in the smaller reading-room. For use at these tables, 571 books were sent for from the stack, and 1,022 volumes were taken from the reserved shelves in the reading-room. In special cases Radcliffe students are also allowed access to the stacks, but the pressure for reading space in the stack is so great that their number is necessarily limited. It is to be expected that the Radcliffe Library, now that it has occupied its new building, will itself be able to offer almost everything which is to be found on our "reserved" shelves, so that Radcliffe students will have small occasion to ask for these books which are in almost constant use by our own students.

The Sunday use of the reading-room is shown in the following table. The room is open, to readers only, every Sunday in term-time from one to half-past five in the afternoon.

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| Sunday Use. | 1900–01. | 1901–02. | 1902–03. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|---|---|---|
| Sundays open . . . . | 35 | 36 | 35 | 36 | 34 | 34 | 34 | 35 |
| Users . . . . . | 5,471 | 4,909 | 5,073 | 4,678 | 4,953 | 4,737 | 4,623 | 4,532 |
| Average . . . . . | 156 | 136 | 144 | 129 | 145 | 139 | 136 | 129 |
| Highest number . . . | 226 | 225 | 227 | 173 | 187 | 228 | 207 | 217 |

### SHELF DEPARTMENT

Mr. Frank Carney, who has charge of the current work of the shelf department, reports 15,602 volumes permanently located in the stack during the year. Of this number, 13,855 have been added to classes previously arranged, and 1,747 belong to classes newly classified in the course of the year. This, however, does not fairly indicate the extent of the shelf department's operations. The total number of pieces passing through the hands of the department, including both volumes and parts, and pamphlets distributed into boxes, but not including current numbers of periodicals which go directly to the reading-room, was 30,606.

A little progress has been made in the course of the year in classifying new groups of books, but no more than this seems to be possible under the present conditions of the Library. The groups which have been re-arranged are: —

Oceania, 440 volumes.
Austrian Documents, 246 volumes.
The collection of reference books and bibliographies in the Reference Room, 923 volumes.
A group of miscellaneous rare books and books of historical association in the Treasure Room, 138 volumes.

The re-classification of French History, mentioned in my last report, was completed and the new shelf-lists have been written, but the shelf-marks on the catalogue cards have not yet been changed. The collection as it now stands numbers 11,535 volumes.

The receipt of the Francis Parkman Memorial Fund made it desirable to re-classify the books on Canada (one of the groups which must eventually be re-numbered in any case), and to incorporate with it the books received from Mr. Parkman's library, which had previously been kept separate. For this work and the re-classification of books on Mexico, Central America, and the West Indies, we are indebted to Professor A. C. Coolidge, who offered to bear the expense. The books on Canada are already shelf-listed, but the

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shelf-lists for the other countries must be written during the year now beginning.

We have also been able to bring together and incorporate with the collection of Proverb literature given several years ago by Mr. John Bartlett, the other works on Proverbs belonging to the Library, which up to this time had remained with the Folklore collection.

The total number of volumes now contained in the classified collection is 390,493. On the shelf-lists which represent unclassified books, — namely, those that cover what remains of the old alcove system in operation before 1877, and those that contain the record of recent accessions in subjects not yet classified, — there are 93,869 volumes. In the classified groups which were originally arranged and numbered on the "fixed-location" system, — namely, those done from 1877 to 1881, — there are about 116,000 volumes which must eventually be re-classified or re-numbered in accordance with the general scheme now in use. That is to say, we still have about 210,000 volumes not yet permanently classified. The longer this work of re-classification is postponed, the more burdensome it becomes, since several thousand volumes are added annually to the subjects arranged on the faulty system, and several hundred volumes are added to the groups of recent books in subjects not yet classified. It would, therefore, be the truest economy for the Library to take up and complete this work at the earliest possible date. A little progress in re-classification will be made during the coming year, for it has been possible to bring together the books on bibliography and literary history into the rows in the basement of the east stack made vacant by the removal of the British Documents. It may also be possible to take up the classification of books on India, a subject which it is desirable to have classified, since we are now making, through Professor Coolidge's generosity, substantial additions; but further than this we can hardly go in the classification of new subjects until more shelf-room is provided. It would be possible, however, to re-number, and so far as it is necessary, to re-classify, the English history and literature, American history, French and German literature, and the books on language and classical philology, which are now numbered on the old plan of assigning numbers to shelves instead of to subjects — the 116,000 volumes mentioned above. With our present staff, however, it is impossible to do this. Another reason why this work should be undertaken as soon as possible is that the shelf-lists, having been originally written twenty-five or more years ago, are now so copiously interlined as to make it almost impossible to enter new titles upon them.

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Besides the constant readjustment of shelves necessitated by the crowded condition of the Library, the shelf department has had an unusual amount of other shifting to do. The occupation of the new addition to the Library involved a number of changes. The whole set of British Documents, except those of the earliest sessions, were moved out into the new document room in the basement. The re-building of the shelving for pamphlets made it necessary to remove the whole pamphlet collection, first into the rows vacated by the British Documents, and afterwards back into their new quarters. The 27,000 sheet maps had to be transferred from the old cases in different parts of the building to the new cases in the Map Room. The collections of duplicates and of recent gifts not yet examined, temporarily stored in different places in the east basement, were brought together into the Duplicate Room. The removal of these volumes allowed the periodical sets in the east basement to be expanded, and this involved the shifting of six or seven rows of books. The rare books, for which the Treasure Room provided a new storehouse, were brought together from their separate closets in different parts of the building and installed in the new cases in the Treasure Room. In addition to this, further changes on the second floor of the west stack were found to be necessary, in order to provide a convenient working-place for the new Graduate School of Business Administration. The alcove on the west side of the building formerly occupied by the shelf department has been fitted up for the use of this School with tables and cases for current trade periodicals. The rows of shelves adjacent to this alcove were, however, occupied by books on Education, and it was found necessary to change the location of this collection, as well as of the books on Natural History, General Science, Anthropology, and Sociology, in order to bring the Economic collection into convenient relation to the working tables of the Graduate School. This involved the shifting of about 40,000 volumes; but the work was done during the latter part of the summer with dispatch and without seriously hindering the current service of the Library.

The annual examination of the Library, which consists of comparing the books on the shelves with the shelf-lists, now occupies four persons somewhat more than a month continuously, and in addition, much time has to be spent afterwards in running down and accounting for the books which are not found on the shelf at the time of the examination. The result of the examination this summer is that sixty-one volumes are reported missing from the open shelves, and sixty-five volumes from the book-stack, a much better result than

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was shown by the examination of last year. Of the 264 volumes reported missing last year, ninety-two were found on the shelves at this summer's examination, besides thirty others which had been noted as missing in earlier years. The net losses of twenty-five years, as shown by the annual examinations, now amount to 1,300 volumes.

The annual cleaning of the books in the Library now occupies four men about three months, and is a constantly increasing, but apparently unavoidable, item of expense. It is surely time that some effective measures be taken to check the increasing smokiness of Cambridge air. In the last half dozen years, there has been a serious change for the worse. It is no slight matter to have over three-quarters of a million books growing steadily dirtier, their bindings, pages, and plates becoming inevitably more and more soiled — soiled by the tenacious griminess of soft-coal smoke, which is quite a different thing from the coating of ordinary dust that a breath displaces. It is impracticable to keep more than a comparatively small number of the choicest volumes protected from injury of this kind, and perfect protection for such books can be had only by means of expensive cases which, like those in a museum, are opened and closed with difficulty. It is needless to add that the College Library possesses at the present time no cases of this description. Something might be done by sealing all the windows and drawing in air through screens by means of electric fans. But this is an expensive process, and one which must be kept in constant operation, and unless air is introduced in larger quantities than is usual with such machinery, it is difficult to do intellectual work in a building thus supplied. Some improvement would result from the use of dust-laying compounds on the paths in the Yard and on the adjacent streets, but the fundamental reform to be striven for is the elimination of smoke from the air. In advancing this reform, the College would be benefiting not only its own collections of books, specimens, and instruments, but every house in Cambridge in which furniture and carpets, walls and hangings, books and pictures, are suffering from an insidious enemy.

To return to the present conditions in the Library, the work of cleaning seems to done with reasonable speed and in a fairly satisfactory manner, a spray being used on the cloths with which the books are wiped, so as to prevent the scattering of dust through the air. In the course of the summer, we were allowed to test one of the new vacuum machines for cleaning books — a movable affair which could be connected with the ordinary electric light sockets,

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and could be dragged from one end of a row to the other. A test of the working of the machine, extending over several hours, seemed to show that by its means the work could be done somewhat more efficiently, with less spreading of dust, but not very much more quickly than by hand. The pneumatic brush, however, could be applied to some places not easily reached otherwise, such as steam-pipes, window ledges, rough plaster walls, and the floor underneath low shelves. On the other hand, the brush, with the implement which holds it, is apt to injure old bindings, unless very carefully used, and it is more fatiguing to hold than a cloth. The original expense of the machine is a large item, and the cost of current to run it, though not large, is continuous. Since, moreover, there seems to be no considerable gain in rapidity of work, either one machine must be employed through most of the year, or four machines must be employed for the three summer months. The first alternative would be annoying to readers, since the noise of the whirring fan is distinctly troublesome; the second alternative increases the initial expense. I am, therefore, forced to conclude that no real advantage would be obtained by employing any of these mechanical cleaners.

### CATALOGUE DEPARTMENT

Mr. Currier, in charge of the catalogue department, presents the following figures in regard to the work of this department.

| Catalogue Work. | 1903–04. | 1904–05. | 1905–06. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|
| Titles catalogued for College Library: | | | | | |
| Full and complete work | 8,842 | 7,401 | 7,860 | 8,523 | 8,431 |
| Continuations, analytical entries, etc. | 5,573 | 6,319 | 5,960 | 6,634 | 6,235 |
| Incomplete work | 6,301 | 10,442 | 6,295 | 6,454 | 5,228 |
| Total | 20,716 | 24,162 | 20,115 | 21,611 | 19,894 |
| Titles for Dept. and Special Libraries | 4,121 | 3,562 | 4,867 | 4,422 | 4,090 |
| Total titles catalogued | 24,837 | 27,724 | 24,982 | 26,033 | 23,984 |
| Cards added to Catalogue: | | | | | |
| Printed cards — | | | | | |
| College Printing Office | 11,827 | 6,026 | 7,243 | 6,270 | 6,210 |
| Library of Congress | 7,011 | 7,981 | 8,558 | 9,216 | 10,248 |
| A. L. A. Publishing Board | 5,916 | 3,460 | 2,457 | 3,195 | 2,025 |
| Total | 24,754 | 17,467 | 18,258 | 18,681 | 18,483 |
| Written cards | 15,570 | 23,211 | 22,168 | 22,766 | 23,050 |
| Total | 40,324 | 40,678 | 40,426 | 41,447 | 41,533 |

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The catalogue department lost through marriage three capable assistants, whose places were taken by relatively inexperienced persons. The installation of a new catalogue case and the consequent redistribution of cards and renewal of labels, guides, etc., also interfered with the regular course of work, and the total number of titles and of cards added to the catalogue shows a corresponding diminution. A more detailed study of the figures from which the table above is made up, and which it summarizes as briefly as possible, shows that in the regular work completely done there was an actual increase of 380 titles, and that the decline was mainly in the work done by abbreviated or temporary methods. Although the year ended (July 31) with an unusually large number of uncatalogued books on hand, this was due to the receipt of an exceptionally large number of gifts and purchases during the last months of the year. In fact, the department succeeded, by a careful adjustment of the ratio of complete to incomplete work, in keeping up with the current receipt of books, an examination of the 3,850 uncatalogued titles on hand August 1, 1908, showing only 36 which had been on hand more than a year, and 409 which had been here more than six months and less than a year.* This is an improvement on last year's figures, but we may properly expect a further improvement year by year. With our present staff, however, our only way to keep up with our accessions is to catalogue in summary fashion approximately 40 per cent. of the books received, with the expectation that the work will at some future day be revised and completed.

Our use of Library of Congress cards increases slightly. These cards were used for 31.9 per cent. of the total titles fully and permanently catalogued, as against 27.6 per cent. the year before and 23.6 per cent. four years ago. Mr. Currier concludes, however, after carefully watching the details of the work, that, for short titles and those involving no difficult investigation, the use of these cards results in little or perhaps no saving of expense over written cards, on account of the time spent in ascertaining whether the cards can be had, in ordering them and checking them off, in comparing them with the books, and in preparing them for the catalogue. The advantage gained is that we get a printed card instead of a written one, and that duplication is easy. As compared with cards printed for us at the College printing office, the saving is, of course, very large.

* This does not include, however, the books received from Professor Norton's library, only a part of which have yet been catalogued.

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Mr. Currier reports a number of changes in the arrangement of cards in the author catalogue, made after a careful study of conditions. Such study shows how closely an easy use of the catalogue depends on small details, and how conditions may change with the growth of the Library. Methods which are perfectly satisfactory in a catalogue of 25,000 cards become intolerable in a catalogue embracing a million and a quarter cards. The arrangement of cards entered under personal forenames is an instance in point. "Formerly (to quote Mr. Currier's report) these were arranged by a somewhat arbitrary scheme based on precedence of rank. Thus under "John" came first the saints of that name; then, in order, the popes, emperors, kings, nobles, and finally other persons for whom the forename John had been selected as the proper entry word. This would have been well enough if under each name there had been a sufficient number of guides showing clearly the plan in use. Under many of the names, where the number of cards was only moderately large, it was impracticable to put in the proper guides, and the filing and consulting of these cards had become a very perplexing matter. The basis of the plan which has now been introduced is that used by Chevalier in his 'Répertoire des sources historiques du moyen âge.' For each person entered under his forename (*e. g.* John) is selected the by-name, or descriptive designation, or the name of the country or place, by which he is best known. These by-names, or designations, or place-names, form the basis of an alphabetical subarrangement under each forename. References are made freely when a person is known by two or more by-names. Where the heading selected for a person consists of two or more forenames, the cards are placed at the end of the series of cards of which the heading consists of but one forename. Thus: —

John, king of *Abyssinia*.
John, the *Apostle*.
John of *Austria*.
John, duke of *Bedford*. See John of *Lancaster*.
John, king of *England*.
John of *Lancaster*, duke of Bedford.
John, duke of *Mecklenburg*. See John Albert I.
John III (Sobieski), king of *Poland*.
John II, *Pope*.
John III, *Sobieski*. See John III, king of *Poland*.
John Albert I, duke of Mecklenburg.

By this plan, each card is filed by an unmistakable rule of alphabetical sequence contributing to ease in filing, as well as in searching for, a given person's name. About one hundred forenames have been revised according to this system, including about all that will

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need special attention. In doing the work, about five hundred reference cards were written." The relation of translations to their originals is another point in regard to which new methods have had to be devised. "The old arrangement, by which titles of translations were kept with the titles of the original text, has proved too complicated, especially for a person looking for a translation from a language not familiar to him. Under the present plan, the cards are divided (according to the number to be arranged) sometimes into three, sometimes into two groups: either (*a*) Originals; (*b*) English translations; (*c*) Other translations; or else (*a*) Originals; (*b*) English translations arranged alphabetically, with other translations of each work following each English title. Luther was arranged (*a*) works or editions in Latin (original, or translated into that language); (*b*) Ditto in German; (*c*) Editions in other languages."

The installation of the new catalogue case, holding the first part of the author catalogue (A-Hic), made it possible to introduce a long wished-for improvement in the guide-cards which, if placed at frequent intervals, lead the inquirer quickly to the point he is aiming at. This is another illustration of the importance of a nice adjustment of details. Our old drawers, built thirty years ago, are scarcely deeper than the height of the cards they hold, so that a guide that is at all higher than the cards is inadmissible; hence we have had to use for guides wooden blocks about an eighth of an inch thick, on the bevelled edge of which a name or combination of letters can be inscribed. These blocks occupy much space in the drawer, and we have, therefore, been obliged to use them sparingly. Our new drawers are a quarter of an inch deeper than the old, yet this slight difference makes it possible to use card guides with tabs projecting above the level of the intervening cards.* In this new section of the catalogue, we have introduced 2,700 of these card guides, about three times as many as the block guides formerly used, yet the saving in the space occupied by them is about nine running feet, which is equal to the contents of seven trays. It would add greatly to the ease of consulting the catalogue if all our old drawers should be replaced by modern trays, which excel the old-fashioned drawers in still other respects than those just mentioned.

* These guides were printed to order by the Library Bureau. The tab bearing its printed inscription is strengthened and protected from soiling by a thin coating of transparent celluloid.

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ORDERING DEPARTMENT AND FINANCIAL CONDITION

The following table shows the income of our book funds, receipts from other sources for the purchase of books, and expenditure for books during the last six years.

| Income and Expenditure. | 1902-03. | 1903-04. | 1904-05. | 1905-06. | 1906-07.* | 1907-08. |
|---|---|---|---|---|---|---|
| From book funds, — | | | | | | |
| Balance from previous year . | $4,036 | $3,208 | $4,074 | $4,781 | †$5,140 | $4,948 |
| Income of the year . . . . | 19,446 | 19,992 | 19,560 | 19,063 | 19,481 | 20,243 |
| Total available . . . . . | 23,482 | 23,200 | 23,634 | 23,844 | 24,621 | 25,191 |
| Spent for books . . . . . | 20,274 | 19,126 | 18,853 | 19,324 | 19,673 | 19,776 |
| Balance to next year . . . . | 3,208 | 4,074 | 4,781 | 4,520 | 4,948 | 5,415 |
| Special gifts, sales, etc. — | | | | | | |
| Balance from previous year . | 2,276 | 1,835 | 1,707 | 2,814 | 4,279 | 3,802 |
| Received during the year . . | 4,457 | 4,406 | 4,611 | 9,484 | 10,115 | 5,351 |
| Total available . . . . . | 6,733 | 6,241 | 6,318 | 12,298 | 14,394 | 9,153 |
| Spent for books . . . . . | 4,898 | 4,534 | 3,504 | 8,019 | 10,592 | 5,832 |
| Balance to next year . . . . | 1,835 | 1,707 | 2,814 | 4,279 | 3,802 | 3,321 |
| Total spent for books, — | | | | | | |
| College Library . . . . . | $25,172 | $23,660 | $22,357 | $27,343 | $30,265 | $25,608 |
| Department Libraries (books ordered through Coll. Lib.) | 7,389 | 6,214 | 5,623 | 9,357 | 7,642 | 5,914 |
| Total . . . . . | $32,561 | $29,874 | $27,980 | $36,700 | $37,907 | $31,522 |

The increase in the income for books is due principally to an increase in the rate of interest on investments, but in part also to the receipt, for the first time, of income from the Castle and the Parkman Memorial funds. The amount spent for books from the Library's book-funds is only about a hundred dollars larger than last year's sum, but the unpaid bills carried over at the end of the year exceed the amount of the previous year's unpaid bills by about $1,050, making the total value of the books actually received during the year considerably greater than in the year before. This corresponds with the increase in estimated cost of orders forwarded, as noted in the next table, and with the fact that the Council made

* The figures in this column (1906–07) have been revised since they were first printed in last year's report.

† Includes $620 accumulated income of the Boott Fund not previously reported.

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its appropriation for books on a more generous scale than in the preceding year.

The work of the ordering department, in charge of Mr. Potter, is summed up in the following table, which gives the figures of the last two years and the averages of three previous five-year periods.

| Work of Ordering Department. | 1890–95. Average. | 1895–1900. Average. | 1900–05. Average. | 1906–07. | 1907–08. |
|---|---|---|---|---|---|
| New orders, — | | | | | |
| Total received and examined . . . | 5,132 | 7,327 | 12,275 | 9,046 | 9,892 |
| Already owned or ordered . . . . | 1,193 | 1,725 | 4,142 | 3,445 | 3,367 |
| Forwarded . . . . . | 3,800 | 5,036 | 7,796 | 6,454 | 6,274 |
| Estimate of cost, — | | | | | |
| For the College Library . . . . . | $9,079 | $10,145 | $14,903 | $16,732 | $17,698 |
| For Departments . . . . . | 2,902 | 3,223 | 3,710 | 4,168 | 3,432 |
| Total estimated cost . . . . . | 11,981 | 13,368 | 18,614 | 20,900 | 21,130 |
| *No. of vols. bought for College Lib. | 4,416 | 5,736 | 7,538 | 7,520 | 8,765 |
| †Total gifts examined and passed on | 16,050 | 16,455 | 21,582 | 18,980 | 22,025 |

The estimated cost of orders forwarded has shown a marked increase, both this year and last, over the previous year and over the average of the preceding fifteen years. This is due mainly to the increase in money gifts received, which we have had the privilege of spending. Of the $17,698, noted in the table, $9,592 was chargeable to library funds, $8,106 to special gifts.

Mr. Potter has often had occasion to complain that he has lacked assistance to keep the current work of his department up to date. Some improvement in this respect has been made possible by a redistribution of certain duties, and by the employment of some extra temporary help, so that the arrears of work were for the time being cleared away. Happily the donor of the Bowie Library bore the cost of the preliminary work on these books — work which would otherwise have fallen on the unassisted members of the ordering department, and would have been quite overwhelming. One of Mr. Potter's assistants is still charged with the care both of the map collection and of the "H. U." collection, to each of which the whole of one person's time could profitably be devoted.

The work of the department is greatly helped by the new collating-room, which has better facilities than the old for handling new

* Excluding volumes formed by binding periodicals and pamphlets, but including volumes received on exchange account from other libraries.

† Including both volumes and pamphlets. See p. 200.

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invoices of books, and by the duplicate room in the basement, in which can be stored gifts as well as duplicates waiting to be disposed of. It is also a clear advantage that the four principal members of the department are now seated in one room, and that, in the re-classification of reference books, those sets which are the constant working tools of the department are for the first time shelved in the same room with the persons who use them most.

### STAFF

The loss of three ladies from the catalogue department has been already mentioned. I also regret to have to record the departure of Dr. Walter Lichtenstein, who resigned September 1, 1908, to become librarian of Northwestern University. Such promotions cripple the staff for the time being, but they add to the Library's prestige, extend the use of whatever is sound and well tried in its methods of administration, and constitute one of the services which this Library renders to other American libraries. It may be interesting to note the other instances during the last fifteen years of persons trained in this Library who have been transferred to responsible library positions elsewhere. I add in parentheses the duration of their previous service in this Library. I place my own name in the list with a grateful sense of the advantage I derived from working here under the direction of Justin Winsor, and in daily contact with Samuel H. Scudder, George F. Arnold, and others who are still valued members of the Library staff.

William C. Lane (1881–93), to be librarian of the Boston Athenæum from 1893 to 1898.

Charles K. Bolton (1890–93), to be librarian of the Brookline Public Library, now librarian of the Boston Athenæum.

Clarence W. Ayer (1896–99), to be librarian of the Brockton Public Library, now librarian of the Cambridge Public Library.

N. D. C. Hodges (1897–1900), to be librarian of the Cincinnati Public Library.

Arthur S. McDaniel (1898–1902), to be assistant librarian of the Association of the Bar, New York.

Edward H. Virgin (1900–04), to be librarian of the General Theological Seminary, New York.

Walter B. Briggs (1886–1904), to be reference librarian of the Brooklyn Public Library.

Charles A. Read (1903–07), to be librarian of the University of Cincinnati.

Walter Lichtenstein (1903–08), to be librarian of Northwestern University, Evanston, Illinois.

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Dr. Lichtenstein's resignation has interrupted, so far as European history is concerned, the newly introduced method of organizing the work of the Library by departments of knowledge, instead of by administrative processes; but since February, Mr. Heald has been working successfully on the same line in several other branches * which for one reason or another could be advantageously referred to him. All books received in these groups he assigns to their places on the shelves, classifies for the subject catalogue, and looks up in reference books and bibliographies so far as he judges necessary. He writes out the titles once for the catalogue, but he is relieved of all copying or clerical work, whether for shelf-list or catalogue, and he leaves as much of the routine work as he can to the assistants who work with him. The method promises excellent results and I am anxious to extend it further, but some readjustment of the relations of the shelf department and of the catalogue department may be necessary, these two departments having hitherto been independently organized. To extend the same division of labor to the ordering department does not seem to be practicable in our case, except occasionally. If the selection of books to be ordered originated in the Library, it would doubtless be wise to make the person who classified and catalogued the books in a given field responsible likewise for the selection of new acquisitions in the same field. In this library, however, we depend upon the college officers for this service, and the duty of verifying titles, avoiding duplication, and placing orders can be more efficiently performed under individual direction.

Following the lead of many other libraries, I have asked the chief officers of the Library — the two Assistant Librarians, the Superintendent of Circulation, the gentlemen in charge of the Shelf and Catalogue departments, and the Superintendent of the Reading-room — to meet in my office from time to time as an advisory Staff Council, and I have submitted to them for discussion various matters of general policy or details of administration that required revision. The use of the new Reference Room and the character of the reference books to be shelved there, rules for the conduct of the Treasure Room, and the objects to which the services of men and of women are respectively best applied, were among the subjects discussed in an informal but useful manner. Meetings are held only

* South America, Oceania, Anthropology, Education, Mathematics, Chemistry, and Engineering.

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when there seems to be some immediate occasion for seeking an interchange of views, and not so frequently as to interfere with regular duties. I expect that from these opportunities to compare experience and to look at the same object from all points of view, the efficient administration of the Library will be strengthened.

WILLIAM COOLIDGE LANE,
*Librarian.*

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# APPLETON CHAPEL
# AND THE PHILLIPS BROOKS HOUSE

To the President of the University: —

Sir, — I have the honor to submit to you a report as Chairman of the Board of Preachers to the University, and also of the Committee having charge of the Phillips Brooks House.

Since this is the first report to find place in the annual volume, it may be permissible to set forth the present situation in the light of an experience longer than that of a single year.

We have been committed for more than two decades to the policy of the conduct of services of worship and instruction under the sanction of the University by a Board of five preachers. These are appointed annually from various Christian communions and represent at times different parts of the country. Immediate responsibility for these services is entrusted to a resident professor who acts as Chairman of the Board.

We are committed also to the policy of voluntary attendance upon these services. It is held that the religious observances of the University community must be free. At the same time the authorities would maintain with regularity and in worthy fashion the opportunity for the expression and deepening of the religious spirit.

In adopting these methods the University entered in 1886 upon a path not then trodden by any American institution of learning. Since that time many institutions have adapted one or both of these principles to their own use. Some have continued the college pastorate and maintained attendance upon such services as a college obligation. Others have abandoned the attempt officially to minister to the religious life of the students. Many institutions have come into being which have never made the attempt.

We on our part, in the retrospect of the years, would express our conviction of the propriety and value of this endeavor and our adherence to these two main principles. With a very few exceptions, all of those who have ever served upon the Board of Preachers have, in the record of the Wadsworth House and otherwise, expressed the opinion that the course chosen is the true one for our conditions. They reiterate that the worth of a religious service conducted by the University is not directly proportioned to the number of those who attend it nor to the frequency of their attendance. The chief thing



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which is important is that such a service exist and that it be regarded with respect. They believe that the influence exerted is a deep and salutary one. They are anxious to make it a larger influence. They suggest numerous changes of the plan in detail. But they express unaltered confidence that the larger results for which we hope are to be looked for in the following of the two main principles with which our effort is identified. Those most familiar with the task, who have given themselves unsparingly to it, are most hopeful concerning it.

It would not be easy to over-estimate the debt which the University owes to the members of past Boards of Preachers. These have come in many cases from important posts of instruction or of administration. They have taken up their residence here and placed their experience at the service of the University. The representation upon this Board of the remoter parts of the country has not been all that we could desire. It has not always proved possible to maintain the proportion of denominations as we could have wished. Not all of those whose aid has been most valuable have been able to serve for the full period which was at first designed. In more recent experience, at all events, two weeks rather than three weeks of residence, out of each half-year, is the limit of service which we may apparently expect. In these circumstances it would have been difficult to carry out our plan without the coöperation of past members of the Board residing in the vicinity of Boston. We ask a good deal of our preachers, both in point of preparation and in the demand upon their time for consultation and pastoral work and in public and social ways. The willingness of practically all who have ever been invited to accept the call of the University has been striking, and their testimony to their enjoyment of the work is encouraging.

Since the adoption of the present system the daily morning prayers have been regarded as the characteristic service. In this long period the average attendance upon that service has not either increased or diminished in notable degree. October is uniformly the month of largest attendance, November of the next largest; March and December follow, being nearly equal; June and February are the months of smallest attendance, being the months of the semi-annual examinations. The highest annual average of, say, 205 daily morning services in the year, was 128. The lowest was 83. The average for the twenty-two years together is 108. The enumeration does not include students in the choir. When one compares this with the attendance upon a daily service in any church, and considers that the community here drawn upon consists exclusively of young males, it must be said to be impressive that, in a society of youth,

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so many should be found who statedly avail themselves of a privilege of worship for no other reason than that they wish to do so.

It should be pointed out, however, that the annual average of attendance has remained stationary, in spite of the fact that in these years the number of those receiving instruction in the University has more than doubled. A portion of that increase, it is true, has been in departments of the University which are remote from the Yard. The possibility of regular attendance, whether of students or of college officers, is limited somewhat by the question of residence. Still more, perhaps, it is limited by the arrangement of hours of instruction under the elective system as this has been developed during these years. Relatively few men attend prayers every day. Many more attend on two or three days in the week as their college exercises permit. The Divinity School has daily evening prayers in its own chapel. But a number of Divinity students attend Appleton Chapel. The attendance from the other professional schools has not kept pace with their growth. They have grown in good degree from the ranks of men not graduates of Harvard College, and these do not at first realize that the Chapel is not a College affair. The Board of Preachers desire to make graduate students feel that the Chapel offers a privilege of which they may avail themselves as freely as do undergraduates.

The Sunday service has been, since the adoption of the present system, an evening service and is open to the public. The number of those in attendance varies greatly. It is sometimes not more than 200. Occasionally the Chapel is crowded. It was designed that attendance upon this service should not prevent the establishing of normal relations of students and officers with the churches of their respective communions in Cambridge or Boston. It seems, however, to be beyond dispute that the practice of attendance upon a second service, and particularly upon an evening service, has considerably diminished within the last twenty years, even among those devoted to the interests of the church. The Chapel, in the nature of the case, has no constituency which it can call its own in the sense of the loyal constituency of a parish church. This fact alone makes it more liable to feel the effect of changes in the customs of the community. The custom of keeping open-house on Sunday evening, upon the part of those who make duty and pleasure of extending hospitality to the students, is more common than it used to be. So far as students are concerned, the Sunday evening congregation, when compared with that at morning prayers, is composed in larger degree of those whose homes are remote from Cambridge or Boston,

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and who, on the whole, are less likely to have established the church relations alluded to above. It may be questioned whether the Sunday service might not profitably be held at some other than the evening hour. In some other respects it seems obvious that we maintain the service of worship under conditions of difficulty which are in part removable. The Chapel itself has with the lapse of time fallen behind the equipment of some other departments of the University's work in fitness for its purposes. What may be called the accessories of our effort have largely remained stationary for many years, while the endeavor to keep up the standard of the leadership in thought and worship has been unsparing.

The costs of the maintenance of the Chapel are met, to the proportion of rather more than two-thirds, from the free income of the University. The Chapel has had only a small nucleus of endowment of its own. In the meeting of the Overseers' Committee on the Administration of the Chapel, last year, the hope was expressed that, at no distant date, such endowment might be provided for the Chapel as would place it upon an assured basis and relieve the general treasury of a large part at least of these charges which it has borne.

In one regard great gain has been made in the provision for the religious life of the University. The Phillips Brooks House admirably fulfils its purpose in affording a home for the religious and charitable activities and the hospitalities of the University. This part of our equipment leaves nothing to be desired. The various religious societies, three of them having permanent quarters at the House, have worked harmoniously together. They entered four years ago upon a combination of their interests in the so-called Phillips Brooks House Association, which seeks to represent them all, and with greater economy and effectiveness to perform certain common functions for them all. In the cabinet of this Association all the constituent societies are represented by their presidents. This arrangement marks a great gain as compared with the lack of coördination and the duplication of function which before prevailed. It is a matter for congratulation and an index of the spirit which has been manifest, that the St. Paul's Roman Catholic Club, although it had received the gift of a club house of its own, yet did not withdraw from its place as one of the constituent societies in the Phillips Brooks House Association.

The work of the old Social Service Committee, which first achieved unity in the philanthropic activities of the College, has been largely merged in that of the Phillips Brooks House Association. The old forms of work have been sustained. Some of them have been much

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enlarged. New ones have been added. The office of the Association is more and more appealed to by churches and settlements having need of the work of young men. In some cases these are prepared to offer compensation for services rendered. Some students are thus legitimately aided in the earning of a part of their expenses while in College. But the amount of work thus paid for is small compared with the volume of social service which is freely rendered. The Association would not, however, lose sight of that education through social service which should accrue to those who, as students, engage in it. The Department of Social Ethics in the University is in a position greatly to aid the men in their choices of work and in the guidance of the studies which that work suggests. And, as heretofore, the advice of an expert, professionally engaged in social service, is provided through funds at the command of the administration of the House. More than 300 men had permanent engagements for a portion of their time, last year, in voluntary social service found through or known to the Association.

The devotional meetings are for the most part under the care of the particular societies. These furnish the more intimate circles of religious fellowship. They maintain in the large the denominational associations to which the individual men are accustomed. To them is committed the furtherance of legitimate denominational interests within the University. The Christian Association has at present 247 active members. The St. Paul's Society has 195 active members. The St. Paul's Catholic Club has about 50 members, communicants. The Harvard Mission unites those members of the Protestant societies who are interested in missionary work. It keeps in touch with Harvard men engaged in missionary work under whatever auspices throughout the world. It has sustained a special representation in India. The Divinity Club connects that department in which professional instruction in topics of religion is given with the religious activities of the University as a whole. Recently there has been manifest among the students a disposition to become members of the Brooks House Association without uniting with any of the constituent societies. There are 51 such active members.

In the promotion of the voluntary study of the Bible, which has been a prominent feature of the opening year, the special administration has been in the hands of a joint committee from those societies which desired to take up this study. There are now 350 students registered in the groups conducting such study. Each one of the constituent societies has its own library and reading room, and these rooms furnish a quiet resort for the students. There is also a loan

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text-book library. The societies arrange for series of lectures and addresses in their several rooms. Many of the lectures upon foundations connected with the University and dealing with religious subjects are delivered at the Brooks House. In the month of October some 1800 men were present at various meetings which were held at the Brooks House. One remark holds true here also which was above made as to the Chapel. Some of the graduate departments of the University which are, like the Law School, near at hand, use the Brooks House much less than it is hoped that they will do. The organization of branches of the Brooks House Association or of the Christian Association in those schools is a thing much to be desired.

A large part of the hospitality, both official and unofficial, of the University, has its center at the Brooks House, particularly that hospitality in which ladies are concerned. The University Teas, the College Teas, the meetings of the Harvard Dames, fill a place in the life of the university community. The Brooks House is the only public building on the Yard where a maid is in constant attendance, and where every provision is made for the reception of ladies visiting the University.

The Committee appointed by the Corporation to have charge of the Brooks House have found their contacts with the Association and its Societies most satisfactory. They express their approbation of the work done at the House and their desire that by every proper means the nature and extent of this work shall be made known to the friends of the University. The members of the Board of Preachers also express their sense of obligation for opportunities of contact with the student body provided for them through the House, and for the coöperation of the men of the Association in the maintenance of the services of worship at Appleton Chapel. The relations of the House and Chapel were never better and the obligations of each to the other never more sincerely felt than at present.

EDWARD C. MOORE.

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# THE GRAY HERBARIUM

To the President of the University: —

Sir, — During the past academic year the continuously employed staff of the Gray Herbarium has consisted of (1) the Curator (Asa Gray Professor of Systematic Botany), (2) an Assistant Professor of Systematic Botany, these two being employed in instruction, monographic and determinative work, editorial duties, collecting, and field exploration, (3) a Collector, employed in tropical field work, (4) a Librarian, employed largely in bibliographical indexing, (5) an Assistant, engaged partly in bibliographical work and partly in the distribution of specimens, and (6) an Assistant, engaged chiefly in the preparation and mounting of specimens. In addition to this regular staff the following aids have been temporarily employed: Mr. F. Schuyler Mathews as artist, Mr. W. W. Eggleston in monographic work, Miss H. E. Day in bibliographical work, and Messrs. C. A. Weatherby and E. S. Reynolds as assistants chiefly in the determination and distribution of specimens.

During the year close attention has been given to the final annotation, verification, and proof-reading of a new (seventh) edition of Dr. Gray's well-known Manual of Botany, a revision upon which the staff has been engaged for nearly ten years. In this work expert collaboration in certain groups has been received from President Ezra Brainerd of Middlebury College, Professor A. S. Hitchcock of the United States Department of Agriculture, Dr. J. M. Greenman of the Field Museum of Natural History, Mr. Oakes Ames, the late Alvah A. Eaton, and Mr. W. W. Eggleston. Mrs. Oakes Ames has contributed an admirable series of detail drawings to illustrate the floral parts of the *Orchidaceae*, and Mrs. Agnes Chase of the United States Department of Agriculture has rendered helpful service in the proof-reading and final annotation of the text relating to the *Gramineae*. Finally, many botanists throughout the range of the Manual have taken a generous interest in the work and have contributed specimens and notes of great importance to its completeness and accuracy.

The chief aims, always held in view during this revision of the Manual, have been (1) a rearrangement of the plant families to show more perfectly their evolutionary sequence; (2) a unification of the nomenclature in accordance with recently adopted international rules; (3) the addition of numerous recently recognized species and



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varieties of plants, both those new to science and those lately found adventive or introduced within the range of the work; (4) the extension of range to include the Maritime Provinces of Canada and more thickly settled portions of Quebec and Ontario; (5) the adoption of the metric system of measurements; (6) the addition of much helpful synonymy; (7) the insertion of numerous and lucid keys; (8) a more detailed and precise statement of plant ranges; (9) copious illustration by conveniently placed and judiciously chosen text-figures; (10) the careful conservation of Dr. Gray's well-judged generic concepts and of the terseness and lucidity which characterized his style.

The more noteworthy sets of specimens received during the year have been as follows: By gift or in exchange: from the Boston Society of Natural History, 7,703 plants, an exchange notable for its extent and value, comprising chiefly specimens collected from 1850 to 1860 by such well-known collectors as Wright, Fendler, Lindheimer, and others in the Southwest; from the New York Botanical Garden, 472 plants of the Philippine Islands and 20 plants of the Bahama Islands; from the Missouri Botanical Garden, 639 plants of Texas, collected by Lindheimer, a collection critically identified and supplementing to a considerable extent the previously obtained representation of the work of this well-known collector; from Mrs. J. M. Spencer, 236 plants of Europe; from the Field Museum of Natural History, 361 plants chiefly of Grenada (W. I.) and of the Chicago basin; from Mr. J. H. Maiden, 199 plants of New South Wales; from Dr. E. Stevens, 206 ferns from the herbarium of the late Mrs. F. T. Stevens, a collection valued as illustrating details of range and local variation of the species represented; from Mr. Walter Deane, of the Herbarium Visiting Committee, 1,697 miscellaneous duplicates; from Mr. W. W. Eggleston, 170 specimens of southern species of the genus *Crataegus;* from Mr. C. B. Robinson, 119 plants of Quebec and Nova Scotia; from the United States National Museum, 113 plants of Mexico, collected by Dr. Edward Palmer. Collections received for identification: from Professor Morton E. Peck, 922 plants of British Honduras; 387 plants secured on the Aleutian Islands by the expedition under the direction of Professor T. A. Jaggar, a collection incited and brought to the Gray Herbarium by the liberality of Mr. N. T. Kidder, member of the Visiting Committee. Received by purchase: from Dr. Edward Palmer, 513 plants from the state of Tamaulipas, Mexico; from H. von Tuerckheim, 625 plants of Guatemala; from S. Arimoto, 1,059 plants of Japan; from Mr. W. Becker, 201 specimens of European

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violets; from Mr. F. Raine, 905 plants of Europe, chiefly from the Riviera and the Vosges Mountains; through Professor C. S. Sargent, 141 plants collected in southern Bolivia and Paraguay by K. Fiebrig; from Mr. A. A. Heller, 280 plants of California, including an admirable set of the local species of the genus *Ribes;* from Mr. Alfred Rehder, 696 plants of Europe; from Mr. W. H. Blanchard, 306 specimens, chiefly of the difficult genera *Rubus* and *Amelanchier;* from Mr. J. C. Parlin, 3,200 plants of Maine, a collection acquired chiefly to show details of distribution and for use as duplicates in exchange. Collected by the staff: by Professor Fernald, 1,502 plants of the Gaspé Peninsula, Quebec; by Professors Fernald and Collins, 156 plants of the same region; by Mr. C. G. Pringle, 66 plants of Mexico, species selected for their rarity, many being new to science.

The entire number of specimens received from all sources has been 23,763. The number of sheets added to the organized portion of the Herbarium has been 12,608. The number of volumes added to the library has been 368, and of pamphlets 426. At the end of the year the library contained 10,760 volumes and 8,884 pamphlets.

Mr. Pringle, again accompanied by his able assistant, Sr. F. L. Lozano, has continued with marked success his botanical exploration of Mexico. Mr. Pringle's many difficulties in penetrating to remote and little investigated portions of Mexico have for a long period been greatly lightened by the generous and effective aid of several Mexican officials high in the governmental scientific service, and it is with great regret that the death in recent years of three of these friends of science, namely, Drs. José Ramirez, Manuel Urbina, and Ferdinand Altamirano, is here noted.

Miss Mary A. Day, Librarian of the Herbarium, with the clerical assistance of Miss E. M. Vincent and Miss H. E. Day, has continued her work upon the Card Index of New Species and Varieties of American Plants, and during the year has issued 9,169 cards, a number exceeding any previous annual issue. The Index, with its increasing size and completeness, has become one of the most important bibliographical aids in all taxonomic work upon American plants.

In the summer of 1908 Professor Fernald consented to accompany in the interests of the Herbarium an expedition to Labrador which was being fitted out under the direction of Dr. John Bryant. Through unforeseen delay in securing, refitting, and equipping a suitable vessel, the expedition was unable to start until the middle of July, and owing to severe illness Professor Fernald was unable to

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accompany it beyond Newfoundland. However, after recovery and rest, he was able to accomplish in Maine a considerable amount of field work toward the continuation of a series of carefully prepared and critically identified specimens known as the Exsiccatae Grayanae, which is from time to time issued in exchange by the Gray Herbarium.

In the autumn of 1907 the remaining portions of the important legacy of the late Mrs. W. B. Potter were paid in full to the President and Fellows for the benefit of the Herbarium, so that a considerable portion of the income accruing from this added endowment was available for the year. This income, together with the contributions generously made by the numerous annual patrons, whose gifts are mentioned in the Treasurer's report, enabled the Herbarium for the first time in many years to complete its financial year not only without deficit, but without the serious efforts to cover its expenses which have been in the past trying alike to the patrons and staff. The voluntary continuance of ten-dollar gifts on the part of annual subscribers has not only shown a friendly interest highly gratifying, but has put the Herbarium in a position to employ further assistance and take advantage of opportunities for exploration and publication important to the continuation of the scheme of work well planned and grounded by Dr. Gray.

A generous patron, who wishes to be anonymous, gave the Herbarium the sum of $500 to be used in the purchase of books. This exceedingly welcome gift has permitted a grateful freedom in buying such desiderata as have been advertised in recent book catalogues, and a portion of the sum has been carried over for similar use during the present year.

Mr. E. F. Williams, Secretary of the Visiting Committee, has given the sum of $100 to be added to the Gray Memorial Fund.

Closely occupied by the needful work upon the revision of Gray's Manual, the staff has been unable during the year to make any progress toward securing the more ample and safer quarters seriously needed by the Herbarium. This need has been so emphasized in past reports that little more can be added. However, to correct several more or less prevalent misapprehensions regarding the type of building desired, it may be said that the Herbarium is not a museum. It contains few objects which could be safely placed on public exhibition or which would be interesting or even intelligible to the average sightseer. What is needed is not a series of exhibition rooms, nor does any combination of the Herbarium with the Botanical Museum or laboratories seem desirable. Both in America

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and abroad there are many examples of the disadvantages to important herbaria through a natural but ill-advised belief that they may be appropriately treated as adjuncts of museums. In museums it is natural and desirable that the most accessible, airy, and well-lighted rooms should be devoted to public exhibits. In consequence the working-rooms are in nearly all cases of inferior quality. The very neighborhood of exhibition rooms brings of necessity a certain amount of noise, dust, and frequent interruptions and inquiries from visitors, and is thus decidedly untoward where precise and exacting scientific work is being done. The proximity of student-laboratories, where chemicals and lights are in use, is a constant fire-menace.

While a large herbarium is not of the nature of a museum nor to be associated with laboratories, it must not be supposed that it is merely an assemblage of dried plants ticketed and filed away as a sort of record of past scientific achievement. When its development and organization are well directed, an herbarium is a constant source of new information regarding the morphological features of plants, their development, classification, range, variation, and precise nomenclature. In proportion to its size and importance, therefore, an herbarium becomes the working place for numerous investigators and visiting specialists. To permit their work under conditions favorable to success, an abundance of light, and ample table-space, as well as convenient access to specimens and books, are of first importance.

In regard to the safety of the collections three constant menaces may be mentioned. Being bulky and highly inflammable, herbaria are always more or less in danger of fire. Several examples could be cited of important herbaria, the result of years of work, which have been completely destroyed by fire during the last two decades. Notwithstanding all usual precaution nearly all herbaria suffer more or less damage from the ravages of insects. Finally, the overcrowding of the cases subjects the delicate and fragile specimens to much wear and breakage. All of these sources of injury and destruction could be wholly removed by a proper housing of the collections.

A thoroughly fireproof building, though expensive, is entirely possible. Experience shows that metallic cases are a practically perfect safeguard against insects, and relief from dangerous congestion would be readily accomplished by providing adequate case-room.

The need of the Gray Herbarium is therefore a building of thoroughly fireproof construction, provided with ample and well lighted work-rooms conveniently arranged with regard to a stack fitted with a sufficient number of steel cases for the specimens and of

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metal shelves for the books of its library. Such a building would have the great advantage that it could have a high degree of permanence, since when crowded by the inevitable growth of the collections it could be readily enlarged by prolonging the several-storied stack, which would be situated in an ell at the back of the structure. A well-planned building, designed specially for a large herbarium, and combining these features of safety to the collections and convenience to its corps of scientific workers, would, it is believed, be unique in the world and would be a considerable achievement for Harvard University, as well as a boon to botanical science. As a personal memorial it would offer in an exceptional degree usefulness, originality, and permanence.

There is no wish to have a building expensively ornate. On the other hand there is no need to restrict it to a factory-like simplicity, for were it given the size and solidity requisite to permanence and fireproof qualities, little additional expense would be required to make it a structure of architectural dignity, even if somewhat severe. How very far the building at present occupied by the Gray Herbarium falls short of the ideal structure here sketched is well known to the numerous botanists who come to it to consult its specimens and books. As repeatedly stated in past reports it has reached a degree of congestion greatly menacing the safety of the collections and seriously hampering the activities of the staff.

The Gray Herbarium is again indebted to the members of its Visiting Committee, who, without exception, have taken a generous and helpful interest in its welfare and furnished valued aid to its undertakings. In the death of Mr. George Warren Hammond, for many years a devoted member of this Committee, the Herbarium lost an excellent and faithful friend. Mr. Hammond left to the Herbarium a legacy of $2,500.

During the year 19 papers have been published by the staff, but as the titles have been fully recorded in the *University Gazette*, they need not be again enumerated here.

B. L. ROBINSON, *Curator*.

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# THE BOTANIC GARDEN

To the President of the University: —

Sir, — As Director of the Botanic Garden I have the honor of presenting my report for the academic year 1907–08.

From the accompanying statement by Mr. Robert Cameron, Head Gardener, it will be seen that the year has been exceptional in some respects:

"The weather during the winter was not severe, and at times there was very little snow on the ground. In spite of the lack of snow we lost only a few of our herbaceous plants.

"The bulbs which we imported from Holland, in the Fall, blossomed well in the spring and proved of unusual interest to the students and to the public.

"Our trees and shrubs seemed quite free from any of the destructive moths, but, late in May, we took the precaution of spraying them all with disparene. One thorough spraying done at the right time appears to be all that is required during the year.

"The summer and fall were very dry, but we were able to keep the plants in good condition with our adequate city water supply. Many of the beds and borders have been replanted and the soil enriched and thoroughly trenched. A very large number of genera and species of plants were raised from seed, and the plants have all been placed in their permanent positions. The plants in the greenhouses are all in good condition. Therefore we may regard the year as successful."

It is difficult to maintain a garden in good condition during a long drought, especially when the range of plants cultivated is large, and much of the soil ill-adapted to the more delicate specimens. The excellent distribution of water-pipes which we made a few years ago enabled us to use hydrant water to the best advantage, and thus bring the plants through the season of their peril with little loss.

The most important gift of plants came from the Bussey Institution, where elementary horticultural instruction is no longer to be given. The collection was of a miscellaneous character but contained many specimen plants which have been very acceptable.

We also acknowledge, with thanks, a donation of bulbs in large quantity, from Messrs. R. and J. Farquhar of Boston, which were of much use in our elementary classes.

Two of our favorite trees which had outlived their usefulness, and had become a source of danger, were cut down before winter. The



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most interesting of these, a noble hickory, which began its life with the last century, was one of the specimens planted by Professor Peck, the organizer of the Garden in 1807. The upper branches of this tree had become so brittle that they rendered difficult the task of attacking the moth-nests thereon, and in addition to this, the heavier branches were likely at any time to fall on the palm-house roof.

Many of the trees in the Garden were invaded by insect pests from plague spots in the neighborhood, but by thorough spraying at the right time the leaves were saved from serious injury. The luxuriant foliage of our trees in summer convinced all observers that our early measures for protection were well taken.

Dr. Clinton, of the Connecticut Agricultural Experiment Station, and his aids, made use of our Garden in the early part of the year as a convenient place in which to investigate the problem of destroying moths by fungal infection. The experiments, not yet finished, promise good results.

Studies in regard to a disease attacking pæonies were also conducted in one of our greenhouses.

There have been only slight changes in the arrangement of our species during the past three years; in fact, we do not believe that their distribution could now be materially improved without making radical displacements. At the present time it is easy for an attentive student to understand, by our existing arrangement, the plant-affinities as they are expressed in the newer and accepted system of classification. Radical changes would compel us to destroy many of our established specimens of trees and shrubs.

One large class of plants, namely the Monocotyledons (including such groups as lilies, tulips, irises, and orchids), cannot be well distributed to exhibit generic and specific relationships. Therefore this class is frequently used for the decoration of a garden in the spring. Of late we have attempted by means of these plants to indicate the wide range of variation in certain species, particularly tulips. The management of these plants has been so successful and the results so instructive, as well as attractive, that it has now been decided to extend the illustrations the coming spring.

Botanic Gardens connected with universities in our country justify their maintenance largely by their usefulness to the public. Our own Garden of seven acres is practically one of the Cambridge parks, as far as its use by citizens is concerned. It is open to all visitors at all times. Furthermore, the University offers to the teachers in the schools of all grades in Cambridge and vicinity such illustrative

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specimens of plants and flowers as can be spared. Common school pupils are often conducted by their teachers through the Garden, where they can examine, in their systematic places, about five thousand species and varieties of plants. This privilege is of increasing value, since with our widening city limits, wild flowers are receding beyond reach of our schools.

The City of Cambridge exempts our Garden from taxation, but does not contribute in any other way to its support. We are compelled to pay for the city water which we use. Therefore, when the University places the Garden at the service of the citizens, it is making a free contribution of no small magnitude to the good of the city.

The chief office of our Garden is to supply the students of Botany in Harvard and Radcliffe plants and flowers out of season. During the long summer our Garden is used by comparatively few students in the University, but during the winter and spring heavy demands are made upon our greenhouses and frames for forced blooms. The large elementary classes, held from February to May, must have enough material for fruitful study, and such a demand taxes our resources to their utmost. The Garden must also supply abundance of material for research to the advanced classes in plant-morphology and plant-physiology. Beside this, the Garden must be ready to cultivate for inspection the new and little known herbaceous plants which occasionally present themselves for description. By a peculiar, though wise, division of labor in our botanical department, the work of description falls to the staff of the Gray Herbarium, an organization separate from the Garden, but occupying buildings on its grounds.

Another task belongs to our University Garden, namely, the cultivation of certain plants which can be utilized by the landscape architect, and the demonstration of approved modern methods of caring for such plants. The Corporation has endorsed the action of the Director of the Garden in placing for this purpose at the disposal of Mr. B. M. Watson, instructor in Horticulture, a certain amount of greenhouse room which will answer present needs. We hope that this arrangement will enable a greater number of students to avail themselves of this important information than could have been possible at Forest Hills.

The Harvard Botanical Station in Cuba continues its experimental work under the disadvantage of a capricious climate. This year there has been an unprecedented drought, which has compelled us to employ irrigation to a great extent. Irrigation always carries with it other items of heavy expenditure. During part of the summer,

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Mr. R. M. Grey, the local superintendent of the Station, was in the vicinity of Cambridge, and this afforded opportunity for consultation in regard to many points. His monthly reports continue favorable. If political conditions in Cuba do not disturb plans now matured for further development of the Station, it may be expected confidently that this adjunct to our Garden will prove of much benefit to the Island. Barring such disturbance, it is likely that the scope of activities at the Station will be considerably enlarged. It should be understood that all the expenses of the Station are defrayed by Mr. E. F. Atkins, of Boston, on whose estate the experimental grounds are situated. Mr. Atkins expresses himself well satisfied with the progress thus far made in the improvement of economic plants, particularly the sugar-cane.

The Botanical Museum, on Oxford street, has received important additions, chiefly in the form of fresh specimens of economic products, to replace some which had been injured by light and by exposure to the air. Our new methods of exhibiting specimens still prove of value. They were especially appreciated by a class of teachers who in the winter months of last year pursued studies in regard to the structure and uses of plants.

The Ware Collection of Blaschka glass models of plants in flower continues to interest visitors and to be of use to students of Systematic Botany. Changes in arrangement and labelling are in progress.

During the absence of the Director on University service, in October and November, his class in Economic Botany was satisfactorily conducted by the Assistant Director, Mr. Oakes Ames. By the use of ingenious methods of illustration devised by him, he made a recondite subject of much interest and profit to all in the course. The Director has been under great obligations to Mr. Ames for valuable counsel on many points of difficulty.

The collection of fossil plants has continued to receive the efficient care of Professor R. T. Jackson.

The Director desires to express again his sincere thanks to the Overseers' Committee on the Botanic Garden and Botanical Museum for their constant assistance. Without their aid it would have been impossible to bring the income for the year so near the outgo. The money gifts are stated in the Treasurer's report.

As we have shown, the demands made upon the service of a University Botanic Garden are many. Satisfactorily meeting such demands costs much money. In the case of our Garden, the expenses have been kept down to a very low figure, largely through the exercise of great care on the part of the Head Gardener, who has

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the oversight of innumerable practical details. But even with constant care on his part and on that of the Director, the expenses for maintaining the efficiency of the Garden annually exceed the assured income. Every year the Director has been obliged to ask friends of the Garden to make good the difference, and generally he has met with gratifying success, but such annual mendicancy is neither dignified nor businesslike. Although the Botanic Garden and the Botanical Museum may presumably enjoy in the distant future some benefit from an endowment soon to come into possession of the University for certain scientific purposes, it seems wise to urge again the immediate increase of our independent invested funds.

GEORGE LINCOLN GOODALE, *Director.*

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# THE ARNOLD ARBORETUM

To the President of the University: —

Sir, — I have the honor to submit the following report on the progress and condition of the Arnold Arboretum during the year ending July 31, 1908.

The reputation of the Arboretum as a scientific garden carried on to increase the knowledge of woody plants by research, experiment, and exhibition is rapidly increasing; but the limit of its development and of its enlargement in usefulness has been almost reached, unless more land for the display of the collections and a larger income for maintenance and for investigation can be obtained. It is possible greatly to extend and improve the Arboretum as a museum of living trees and to broaden the scope of its scientific work. It can easily be made a more beautiful garden and a much more useful establishment than it is, and to do this only land and money are needed. Under existing conditions it has not seemed wise to undertake much new work during the year, and little has been done beyond the care of collections and the improvement of the nurseries. To the nurseries important additions have come from the Arboretum expedition in western China, from which eight hundred numbers of the seeds of woody plants have been received during the year. Among these are the seeds of many plants which have not before been cultivated and several which are new to science. Portions of all of these seeds have been sown at the Arboretum and the rest have been distributed among the best cultivators of hardy plants in the United States and Europe. Nearly all have germinated and many thousand young trees and shrubs now represent here and in Europe some of the results of Mr. Wilson's work in China. His large collections of dried plants and of photographs of which he writes with enthusiasm have not yet been received.

Mr. Wilson left Ichang in March and proceeded by boat up the Yang-tse-kiang River, and when last heard from was at Ta-tsien-lu in the extreme western part of Szech'uan near the Thibetan boundary. It is too soon to speak of the results of his second year's work, but his last letters report continued success.

The interchange of plants and seeds with other horticultural and botanical establishments has been continued during the year; and probably in no other year since the establishment of the Arboretum



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have so many valuable plants and seeds been received and sent out. 7,771 plants (including grafts and cuttings) and 6,591 packets of seeds have been distributed as follows: To the United States, 4,787 plants and 847 packets of seeds; to Canada, 350 plants; to Chile, 8 packets of seeds; to Great Britain, 2,379 plants and 3,859 packets of seeds; to the continent of Europe, 255 plants and 1,854 packets of seeds; to Australia, 10 packets of seeds; to New Zealand, 2 packets of seeds; to South Africa, 11 packets of seeds. There have been received during the year 3,706 plants and 1,893 packets of seeds: of these 2,382 plants and 599 packets of seeds came from the United States; 623 plants and 48 packets of seeds from Great Britain; 701 plants and 48 packets of seeds from the continent of Europe; 7 packets of seeds from Chile; 1 packet of seeds from New Zealand; 39 packets of seeds from India; and 1,279 packets of seeds from China (Wilson).

During the year 5,719 sheets of dried plants have been added to the herbarium; among the most important of these are collections from the Balkan Peninsula (440 sheets), from the Philippine Islands (784 sheets), from Korea (279 sheets), Scandinavian Willows (175 sheets), and North American Crataegus (1575 sheets). 1,200 sheets of dried plants have been distributed.

During the year the Arboretum has received by gifts 2,503 bound volumes.

During the year instruction in dendrology has been given at the Arboretum by Mr. Jack to students of landscape gardening from the Institute of Technology, University students in forestry, and to a class of eighteen special students, principally teachers.

Work on the Bradley Bibliography and on a catalogue of the library has made satisfactory progress during the year.

I take this opportunity to express again my thanks to the Trustees of the Massachusetts Society for Promoting Agriculture for their annual grant for the maintenance of the Arboretum, and to the members of the Visiting Committee for their interest and assistance.

C. S. SARGENT, *Director.*

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# FORESTRY

To the President of the University: —

Sir, — In the Division of Forestry the most notable development of the past year has been the acquisition of the Harvard Forest, a large tract of timberland situated in the town of Petersham, Mass. The land was secured in the autumn of 1907, through the generosity of Mr. John S. Ames of North Easton, Mass., of the Class of 1901, who gave the money necessary for its purchase, and an additional sum for the repair of buildings and for equipment. The area purchased, about 1800 acres, was previously owned by Mr. James W. Brooks, by whom the forest had for many years been protected and made accessible to the public. In order to preserve it, and render it useful both to the town and the cause of forestry, Mr. Brooks offered it to the University at a price substantially below its commercial value. At the same time, owners of adjoining land, Messrs. J. J. Higginson, Edwin C. Dexter, Joseph C. Smith, Henry S. Bennett, Charles S. Waldo, and William Simes, and Mr. Brooks himself, gave contiguous holdings amounting to between 200 and 300 acres. These gifts simplified the boundaries, secured the approaches, and rounded out the area of a demonstration-forest of about 2000 acres.

As a whole, the property combines, to an uncommon degree, the features desirable for the purposes of a forest school. Moreover, by virtue of the use to which it will be devoted, it constitutes, in effect, one of the most attractive public reservations of the State. With an elevation above sea level, ranging from 800 to 1400 feet, the forest offers great variety, both of topography and of woodland growth. It is divided into three separate blocks (see map) of (about) 850, 550, and 600 acres, which are located respectively, northeast, northwest, and south of the village. The northeast block covers the slopes and surrounding areas of Prospect Hill, the northwest block includes the basin of a small pond called Meadow Water, and the south block takes in about two miles of the narrow valley of the Swift River, with a pond and small water power along its course. The total stand of merchantable timber in the forest amounts to upwards of ten million board feet, nine-tenths of it white pine, and the rest chestnut, red and white oak, and other hardwoods. About fifteen miles of good wood-road provides access to almost any por-



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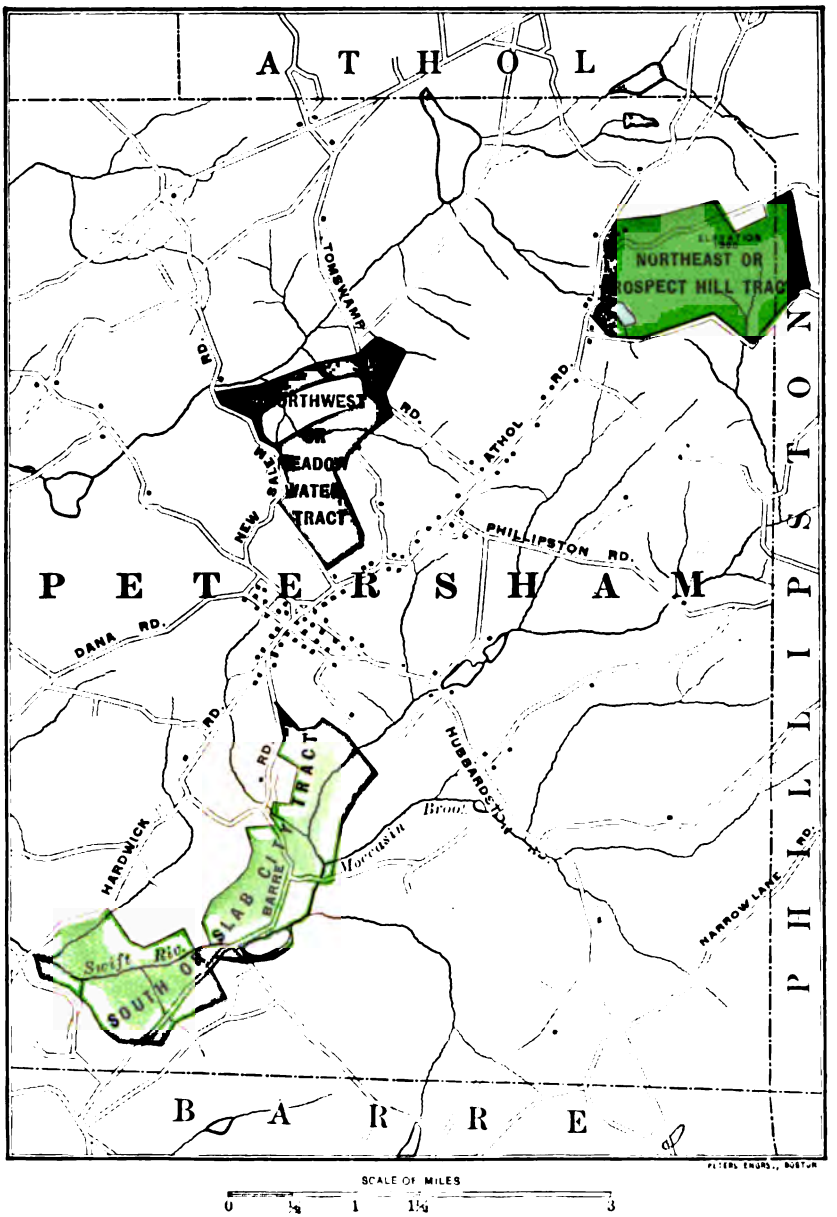


HARVARD UNIVERSITY: HARVARD FOREST, PETERSHAM, MASS., 2,000 ACRES

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tion of the tract, which is thus peculiarly well adapted to logging. Besides the timbered areas, there are about a hundred acres of farm land and orchard, on which are a number of buildings, all located on the north of the Prospect Hill Tract.

For effective instruction in forestry, the possession of such a resource as the Harvard Forest is indispensable. The teaching of forestry in all well-equipped schools includes, as a matter of course, abundant experience in a forest, and involves a lumber business large enough to be typical for the region wherein it occurs. As related to a forest school, such a forest has two main functions: first, to offer a field for instruction in the elements and fundamentals of forestry, such as forest botany, the habits, requirements and silvicultural treatment of forest crops, estimation of timber, calculation of growth; and secondly, as an organized and permanent timber business, to present an example of conditions, methods, and results in scientific forest management. The first function could be fulfilled, to some degree, by almost any forest of reasonable size, even if it were not under management. To fulfil the second, which is much the more important as furnishing instruction, not only to students but also to the community, there must be enough forest land to justify by its production the maintenance of more or less constant lumber operations. In forestry, the ideal of a reasonably sustained yield cannot be approached except through a very gradual process of building up the crop and grouping it according to gradations of age. Thus, a forest in which this ideal is being pursued, and in which both commercial and silvicultural conditions are favorable, becomes steadily more valuable and instructive as a model, as an illustration of plans and principles whose outcome inevitably requires time. It ensures the accumulation and recording of experience in all the processes of forestry, and groups that experience about the central idea of sound business management. The forest must yield a profit, either present or future: otherwise as an object lesson to professional students and timber owners it can have no immediate value. The profit is essential to the instructiveness of the enterprise, but in the present case it cannot constitute either a large or a free surplus. All of it will be needed for the meeting of running expenses and the undertaking of useful experiments which cannot pay for themselves.

Under present economic conditions, a Forest School constitutes one of the very few sorts of ownership which may and ought to undertake the organization of a model forest. It *may* do so because its tenure is permanent, its knowledge is sufficient, and its desire for immediate and large profits is secondary to that for a steady return.

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It *ought* to do so because its obligation is the furtherance of the protection and conservative treatment of forests beyond what the individual can do by himself. Thus, in the Harvard Forest, the University has received an essential resource for instruction and a definite public trust. The forest is to the student of forestry what the machine shop and the hospital are to the students of mechanical engineering and medicine, both a laboratory and an example of practice.

With a view to these purposes, preparations for the occupation of the Petersham property were begun in January, 1908, and continued through the following summer. It was necessary to provide quarters for students, equipment for instruction, and outfit and working force for the conduct of logging, wood cutting, etc. The buildings on the Prospect Hill Tract were fortunately adapted to these needs, having been built and occupied several decades ago by a communistic group known as Fullerites. The main house, a large barrack of three stories containing twenty bedrooms and two large assembly rooms, was repaired and remodelled in detail so as to include, besides sleeping accommodations for about twenty students, a bath-room, two lecture rooms, a living room, a dining-room, reading-room, and two instrument closets. A wing, abutting the main house at the dining-room, was constructed to accommodate a foreman and his family. Both house and wing were connected with two apparently unfailing springs, even the lowest of which had head enough to reach the second stories. Of the out-buildings, several were torn down for building material, one was made over into a horse barn, with stalls for a few cattle in the back lower part, another was cleared for storage of vehicles, tools, etc., and a third was kept temporarily for hay. Additional equipment comprised a pair of heavy draught horses, used to the woods, a wagon, two sleds, logging tools and rigging, and necessary farm and stable implements. A small blacksmith shop, used by former owners, was restored to usefulness. Much remains to be supplied in the way of finish and detail, but the essentials for living, instruction, and the management of the woods are at hand.

The forest labor and eating arrangements of the establishment are in direct charge of a resident foreman. His duties are to carry out all logging and other woods work planned by the Division of Forestry, and to furnish board to the students and instructors, for which object he maintains a small herd of cows, and raises such vegetables as he needs. Living arrangements in the main house are looked after by the students and instructors themselves. Each man sup-

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plies his own bedding and takes care of his room. A charge of $1.25 a week is needed to cover the costs of fuel, light, janitor service, and wear and tear of furniture. Daily routine, as well as accommodations, is camp-like. An early breakfast is followed by a lecture, after which each class works in the woods until four or half past. Not more than two courses are carried on during any one week, and usually the work of each occupies a full day at a time three days in the week. The academic year is divided into three terms, an autumn and a spring term, devoted to field work in Petersham, and a winter term devoted to lectures and laboratory work in Cambridge.

The effectiveness of this scheme, particularly in comparison with the method hitherto necessarily employed in Cambridge, can hardly be overestimated. Concentration on the work in hand with the minimum of interruption, and the rapid acquisition of experience are manifest advantages. But what will prove to be, in the long run, the greatest advantage derivable from the forest, is its quality of permanent business enterprise, to all the records and accounts of which, both financial and scientific, the student will have access.

R. T. FISHER, *Chairman.*

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# THE CHEMICAL LABORATORY

To the President of the University: —

Sir, — Owing to the resignation in November of Professor Walker (Massachusetts Institute of Technology), who had lectured in the course for two years, Chemistry 11 (industrial chemistry) was conducted for the rest of the year by Professor Sanger. The half-course in experimental electrochemistry (Chemistry 13) was resumed under the direction of Mr. Frevert. Professor Torrey's half-course in general reactions of organic chemistry (Chemistry 16) was omitted, and will hereafter be given in alternate years. No other changes were made in the regular courses offered by the Division during the year 1906–07.

The number of elections in the several laboratory courses during the year and in June, 1907, were as follows: —

| | October, 1907. | January 1, 1908. | June 1, 1908. | June 1, 1907. |
|---|---|---|---|---|
| Chemistry 1 . . . . | 332 | 327 | 302 | 300 |
| Chemistry 3 . . . . | 99 | 101 | 88 | 110 |
| Chemistry 4 . . . . | 80 | 84 | 33 | 89 |
| Chemistry 5*a* . . . | 35 | 33 | 29 | 32 |
| Chemistry 6 . . . . | 16 | 17 | 16 | 13 |
| Chemistry 9 . . . . | 13 | 12 | .. | .. (16, Jan. 1, '07) |
| Chemistry 10 . . . . | .. | .. | 14 | 19 |
| Chemistry 12 . . . . | 6 | 6 | .. | .. (10, Jan. 1, '07) |
| Chemistry 13 . . . . | .. | .. | 4 | x[1] |
| Chemistry 20*a* . . . | 1 | 1 | 2 | x |
| Chemistry 20*b* . . . | 3 | 3 | 5 | 5 |
| Chemistry 20*c* . . . | 10 | 11 | 11 | 6 |
| Chemistry 20*d* . . . | 8 | 9 | 9 | x |
| Chemistry 20*e* . . . | 3 | 3 | 3 | 1 |
| Chemistry 20*f* . . . | 7 | 7 | 7 | 15 |
| | 563 | 564 | 523 | 540 |

The number of elections in those courses in which no laboratory work is given were as follows: —

[1] x signifies that the course was not given.



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| | October, 1907. | Jan. 1, 1908. | June 1, 1908. | June 1, 1907. | |
|---|---|---|---|---|---|
| Chemistry 1 (for the lectures only) | 5 | 4 | 4 | 2 | |
| Chemistry 6 (for the lectures only) | 0 | 1 | 3 | 2 | |
| Chemistry 12 (for the lectures only) | 0 | 0 | .. | .. | (1, Jan. 1, '07) |
| Chemistry 2 | 82 | 89 | .. | .. | (102, Jan. 1, '07) |
| Chemistry 5 | 32 | 30 | 32 | 34 | |
| Chemistry 7 | .. | .. | 6 | 9 | |
| Chemistry 8 | .. | .. | 50 | 60 | |
| Chemistry 11 | 40 | 38 | 35 | 24 | |
| Chemistry 15 | .. | .. | 31 | 42 | |
| Chemistry 16 | x[1] | x | .. | .. | (11, Jan. 1, '07) |
| | 159 | 162 | 161 | 173 | |
| Total number of elections | 722 | 726 | 684 | 713 | |

The number of elections in laboratory courses during 1907–08 was 541, as against 566 in 1906–07, while the entire number was 791 in the last year and 853 in the year before. These figures, which should be compared with those in the table on page 236 of the President's Report for 1906–07, show a decided decrease in elections over previous years, which is not proportional to the decrease in attendance in the Faculty of Arts and Sciences for 1907–08. The percentage of students completing laboratory courses is 19.1, which is smaller than during any of the last twelve years, while the percentage in all courses has fallen from 29.6 last year to 27.9 for 1907–08.

This loss may be ascribed to the passing of the Lawrence Scientific School with its prescribed programmes, perhaps also to the additional charges for extra courses, but at least a part may be explained by the unfavorable conditions in Boylston and Dane Halls. When the majority of students who elect our courses must do laboratory work and listen to lectures in poorly adapted and badly ventilated rooms, it would not be strange if a knowledge of these conditions should deter a student from electing courses in chemistry. As has been repeatedly said in previous reports of the Directors, there is no adequate relief for these conditions possible in the present buildings. As to new and much needed laboratory courses, we can do nothing without a new building. Only certain lines of research in Boylston Hall are possible, and these must be conducted in constant anxiety lest they interfere with each other. The situation is unworthy of Harvard University.

We continue to receive books and journals from Professor Wolcott Gibbs.

[1] x signifies that the course was not given.

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The following investigations were carried on by the staff of the Division during the year:—

Professor Jackson, with Dr. Latham Clarke, continued work on curcumine and rosocyanine. With Mr. H. A Flint an oxidation product of tetrabromorthoquinone was investigated and proved to be an unsaturated lactone. With Mr. G. L. Kelley the study of derivatives of tetrachlororthoquinone was continued, and the constitution of two compounds established. With Mr. H. E. Bigelow the triiodbrombenzol was prepared and some of its derivatives were studied.

Twelve investigations were carried out under the direction of Professor Richards. Mr. F. B. Coffin continued the work on the atomic weight of nitrogen, begun in the University of Berlin during the preceding winter. He analyzed ammonium bromide and obtained results indicating that the recently found, low atomic weights of nitrogen and silver are reasonable. Mr. H. H. Willard began the careful study of the composition of perchlorates, especially lithium perchlorate, and found a new value for the atomic weight of lithium (6.94), nearly a whole per cent lower than that found by Stas. Both these researches are being continued during the present year. Mr. Grinnell Jones continued the study of the compressibilities of simple substances, and determined the values for the chlorides, bromides, and iodides of potassium, sodium, thallium, and silver. Interesting systematic relations were found in these values, and an explanation was obtained for the negative coefficient of expansion of silver iodide. Dr. A. W. Rowe applied the new adiabatic method of calorimetry with success to the study of the specific heats of liquids, and Mr. F. G. Jackson used a similar method for the determinations of the specific heats of the solid elements at very low temperatures, employing liquid air from the large laboratory plant, and finding interesting systematic relations among his results. Mr. L. L. Burgess used the adiabatic method of calorimetry for determining the heats of solution of metals, — the basis of the thermochemistry of all metallic salts. The new calorimetric device was employed also by Mr. J. H. Mathews in his study of the latent heats of vaporization of organic substances. The object in these determinations was to compare the data obtained with other physical properties of the substances in question. Messrs. H. L. Frevert, R. N. Garrod-Thomas, and J. H. Wilson studied the energetics of amalgams, using both thermochemical and electrochemical methods, and investigating amalgams containing cadmium, zinc, lead, copper, iron, lithium, tin, thallium, and indium. Mr. F. C. Mabee studied the potentials between dilute solutions as well as the electromotive force of the cadmium cell. Dr. K. Delbrück determined the amount

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of hydrogen in the atmosphere, obtaining results essentially supporting the work of Lord Rayleigh, but disagreeing with the results of Gautier. Four of these students (Messrs. Frevert, Jones, Mathews, and Wilson) presented their work as part of the fulfilment of the requirements for the degree of Doctor of Philosophy. During the year Professor Richards received a sixth grant of $2,500 from the Carnegie Institution in Washington, making a sum total of $15,000 granted him from this source. These grants have both greatly raised the quality and increased the quantity of the work carried out under Professor Richards's direction.

Professor Torrey continued with Mr. J. E. Zanetti an investigation of ethyl pyromucylacetate, and particularly of its pyrazolone derivatives, which had been begun two years before, but had been discontinued. With Mr. W. H. Hunter, the study of silver and mercury salts of the haloid phenols was continued, and the replacement of bromine in bromanil by the action of potassium iodide was further investigated. With Mr. W. MacPherson, the work on new azo dyes from paraamidoacetophenone was continued. With Mr. H. I. Jones, some work on protocatechuic aldehyde was begun, and with Mr. E. D. Clark, the benzidine derivatives of some closely related aromatic aldehydes were prepared and studied. With Messrs. R. D. Bell, W. E. Kavenagh, and W. W. Paine, certain derivatives of resacetophenone were studied. Mr. C. A. Neymann tested the coloring properties of some new azo dyes from paraamidobenzophenone, and Mr. E. N. White worked on certain derivatives in the furfurane series.

Professor Baxter continued the investigation on iodine pentoxide, begun two years ago by Mr. G. S. Tilley, and confirmed the earlier results of the research, although the value for the atomic weight of silver indicated by the results (107.85, referred to oxygen as 16.000) is lower than is to be expected. Mr. F. B. Coffin completed the analysis of silver arsenate, which he had begun the year before, and obtained a value for the atomic weight of arsenic of 74.96, on the assumption that the atomic weight of silver is 107.88. Mr. R. H. Jesse, Jr., continued an investigation on the atomic weight of chromium by the analysis of silver dichromate. The results of this work confirm with great exactness the value previously obtained in this laboratory by Drs. M. A. Hines and E. Mueller from the analysis of silver chromate. Both researches indicate 52.01 as the most probable value for the atomic weight of chromium, if silver is assumed to be 107.88. Mr. A. C. Boylston began the analysis of phosphorus tribromide, in order to redetermine the atomic weight of phosphorus, and succeeded in devising satisfactory methods both for the preparation of the tribromide in a very pure state and for its

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analysis. Mr. H. C. Chapin continued his work on the purification of neodymium salts with the object of redetermining the atomic weight of neodymium. Some very pure material has been obtained after several thousand crystallizations, and the analysis of the chloride is under way. Mr. H. W. Daudt investigated the behavior of air and ammonia in the presence of catalytic agents at high temperatures, as well as several minor analytical problems. Mr. L. G. Smith continued his work on apparatus for measuring optical activity photographically. Mr. H. H. Bartlett continued to make analyses of soils and plant ashes. Mr. F. Barry began a research on the refractive power of tin solutions.

Dr. Henderson, in addition to his work at the Medical School, studied with Messrs. J. H. Means and G. A. Leland, Jr., the behavior of muscle after compression.

Dr. Clarke succeeded in synthesizing four new octanes, and in the course of this work devised several methods for the preparation of substances already known, besides discovering many new compounds and observing some striking reactions. He also studied certain compounds in the anthraquinone series. With Professor Jackson he continued the research on curcumine and rosocyanine begun a few years ago. With Mr. J. H. White, he studied certain unsaturated chain compounds of the series $C_{10}H_{18}O$. With Mr. V. Cobb, he investigated the compounds formed from anthraquinone by the action of ethyl magnesium bromide. He also prepared a set of notes on "Inorganic Chemical Preparations," which has been printed by the University for use in Chemistry 1.

Professor Sanger studied with Mr. W. A. Boughton the separation and estimation of arsenic and antimony by means of the Berzelius-Marsh method, and devised with Mr. Boughton a method for the approximate estimation of small amounts of morphine. With Mr. E. R. Riegel, the Gutzeit method was adapted to the detection and estimation of small amounts of antimony. With Mr. L. H. Whitney, the study of chlorsulphonic acid and pyrosulphuryl chloride was continued for a part of the year, resulting in the discovery, by the use of liquid air, of a method for the identification and separation of these bodies, based on the wide difference in the temperatures at which they solidify.

As the titles of the papers published during the year by members of the Division have been fully recorded in the *University Gazette*, they are not reprinted here.

CHARLES R. SANGER, *Director*.

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# THE JEFFERSON PHYSICAL LABORATORY

To the President of the University: —

Sir, — The attendance on the courses in Physics during 1907–08 was as follows: —

| | |
|---|---|
| Physics 1 (omitted during 1907–08). | |
| Physics 2 | 10 |
| Physics 3 | 28 |
| Physics 4 | 15 |
| Physics 5 (united with 2). | |
| Physics 6 | 4 |
| Physics 11 | 10 |
| Physics 12 | 21 |
| Physics 14 | 10 |
| Physics 17 | 14 |
| Physics *B* | 92 |
| Physics *C* | 186 |
| Graduate Students | 14 |
| | 404 |

The establishment of the Bureau of Standards at Washington has shown the wisdom of the Division of Physics in not accumulating expensive apparatus for comparison of standards of length, weights, electrical units, and other standards employed in physical measurements. The funds of the Laboratory are thus left free for furtherance of the researches of the professors and graduate students by the employment of skilled mechanics and a glass-blower.

It is encouraging to note the number of graduate students who are at work in the Laboratory.

Five volumes of the results of investigation by professors and students have been published during the past five years; and these volumes testify to the great impetus given to scientific research by the gifts of Mr. Coolidge.



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The investigations now in progress or completed during the past year are as follows: —

| | | |
|---|---|---|
| Professor B. O. Peirce. | Researches | in Magnetism. |
| " E. H. Hall. | " | in Magnetism. |
| " W. C. Sabine. | " | in Acoustics. |
| " J. Trowbridge. | " | on Discharges of Electricity in Gases. |
| " G. W. Pierce. | " | on the Electrical Properties of Crystals. |
| " T. Lyman. | " | in Spectrum Analysis. |
| Dr. H. W. Morse. | " | on Electrolytic Condensers. |
| " H. N. Davis. | " | on Superheated Steam. |
| Mr. L. A. Babbitt. | " | in Magnetism. |
| " P. W. Bridgman. | " | on Effect of Great Compression on Steel. |
| " E. L. Chaffee. | " | on Velocity of Cathode Rays. |
| " L. L. Campbell. | " | on Magnetism. |
| " H. C. Hayes. | " | on Thermo-Electric Properties of Alloys. |
| Dr. J. L. Hogg. | " | on Viscosity of Air. (Dr. Hogg worked during the Summer School.) |
| Mr. M. L. Masius. | " | on Superficial Tension. |
| " F. Palmer. | " | on Ionisation of Air. (Mr. Palmer worked during the Summer School.) |
| " W. G. Sawtelle. | " | on Electrical Discharges. |
| " S. B. Serviss. | " | on the Joule Thomson Effect. |
| " T. T. Smith. | " | on the Effect of Magnetism on Crystals. |

Among these researches are several of great practical importance: that of Mr. Bridgman is epoch making, for he has carried the work far beyond the celebrated investigation of Amagat.

The Laboratory offers unusual facilities for the study of the important subject of the discharges of electricity through gases.

The reference library of the Laboratory is exceedingly meagre and an attendant stenographer would greatly facilitate the work of the Department.

JOHN TROWBRIDGE, *Director.*

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# THE DIVISION OF ENGINEERING

To the President of the University: —

Sir, — I respectfully submit the following report on the work of the Division of Engineering for the year 1907–08.

The courses of instruction remained substantially the same as during the preceding year, with two exceptions: Engineering 16*a*, a course on the Generation, Transmission, and Utilization of Electrical Energy, was dropped entirely, and two other half-courses, Engineering 16*c* and Engineering 16*g*, were slightly modified to cover the same ground in a better way. A course on the Elasticity of Materials, Engineering 20*k*, was added at the request of two graduate students, who wanted to make a special study of the qualities of cast iron.

Certain laboratories were much improved during the year in the interest of the courses in Special Fields established for the benefit of graduate students. The laboratory for the examination and testing of cement and concrete, including under the latter head large concrete members, was extended under Professor Johnson's direction, and some new apparatus was purchased for the purpose of enabling competent students to obtain a thorough experimental knowledge of concrete. Furthermore, it will now be possible under the guidance of the instructor to obtain useful data on the mixing of cement, sand, and rock for producing the concrete best adapted to specified purposes. This is a new subject, whose importance to engineers and constructors cannot well be overrated.

The laboratory for the investigation of gas engines and other internal combustion motors has been greatly enlarged by Professor Marks since his return from Europe, so that this new and rapidly growing branch of mechanical engineering is in a fair way to have adequate treatment in the University. The instructor has brought to this subject the results of his study and work in Germany, and his courses in the laboratory should prove extremely interesting and profitable to students desiring a good knowledge of thermodynamics.

A number of valuable additions have been made to the apparatus in the electrical engineering laboratories, some directly in the interests of graduate students and some for undergraduates. Opportunities



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for special research in several fields connected with the applications of electricity have thus been much improved.

In the three laboratories here mentioned, graduate students from other colleges and technical schools cannot fail to find advantages in connection with the study of special topics in Engineering.

The full-course enrolments during the past three years (covering the year preceding the establishment of the Graduate School of Applied Science and two succeeding years) are: —

| | 1905–06 | 1906–07 | 1907–08 |
|---|---|---|---|
| Total full-course enrolments | 1364.5 | 1221.0 | 1303 |
| First-year Mathematics | 195.5 | 112.5 | 132 |
| Engineering subjects, including Calculus | 1169.0 | 1108.5 | 1171 |

This table shows that the recent change in the method of getting degrees in Engineering has not thus far caused any falling off in the number of students taking Engineering courses. The only decrease has been in first-year Mathematics, easily accounted for by the electives under the Department of Mathematics in the College. Attention was called to this last year. While the numbers have only held their own during the change which has been going on, there has been a notable improvement of quality in the work done by the students, so that with the same number of enrolments men better fitted to enter the profession of Engineering will be graduated in the future. The high quality of the work done by the graduate students of Engineering gives promise of a great sphere of usefulness for the courses in Special Fields. Some excellent theses were written under these subjects, a few of them so good as to be worth publishing.

Some idea of the character of the graduate work may be obtained from the titles of the theses in Special Fields: —

Investigation of the Phenomena of the Humming Telephone.

A Study of the Tachograph and the Cyclical Variation in the Speed of a Small Gas Engine.

Experimental Work on the Phenomena of Explosions of Gaseous Mixtures.

The Development of Elastic Formulae for Flat Plates and the Experimental Results Obtained from Breaking a Number of Cast Iron Plates under Hydraulic Pressure.

The Correct Proportioning of Concrete and its Influence upon Strength.

The Effect of Absorbed Moisture upon the Volume of Concrete.

Tests on Reinforced Concrete Footings.

Electrolysis of Steel in Reinforced Concrete.

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One aspect of the registration is interesting. A great deal of the best work in graduate courses was done by students who did not seek a degree, but who came for a special study of one subject. There were some who had come from the practice of their profession to take an additional year of study. This offers a very useful field for the University.

The number of full-course enrolments at the Squam Lake Camp was the largest in the history of the Camp, being 240, an increase of 39 over the preceding year. There were 140 students, some of them having remained for two courses. The health of the Camp was excellent, and the food wholesome and good. The instruction reached a fine state of efficiency under Professor Hughes' direction, and most of the students who went to the Camp did excellent work during the summer. The courses given were: —

Engineering 4*a* (Surveying).
Engineering 4*d* (Railroad Engineering).
Engineering 5*b* (Elementary Mechanics).
Engineering 5*d* (Resistance of Materials).

The demand for instruction in the summer has therefore not decreased with the disappearance of the four-year prescribed courses of the Lawrence Scientific School.

Through the generosity of graduates of the University the Division was enabled to purchase two farms adjoining the present property. They amounted to something over 200 acres, thus bringing the total area owned by the University up to 650 or 700 acres. The exact acreage will not be known until after the land has been carefully surveyed. The University is thus able to offer students exceptionally good instruction and a rational out-door life on a fairly large property entirely under the control of the University authorities. The moderate cost, about $10 a week for instruction and board, should bring a summer spent in this way well within reach of any student.

The neighborhood of the lake and its discharge through a small stream affords an exceptionally good opportunity for a permanent and continuous study of the rainfall and run-off for the entire watershed. Some equipment would be required for this, as well as a permanent attendant, who could also be an instructor at the Camp. While this would entail additional expense, the results would have a high scientific value, and it would be worth while to the University to make this contribution.

The growth of the Camp has created a pressing need for a better supply of drinking water, for a larger kitchen and dining-room, and

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for additional space to be used as study and drafting-rooms. Tentative plans have already been made for these additions, but the Camp has not the ready money for the purpose. The work can be carried on as at present for a year or two, but ultimately these changes ought to be made. The income from fees was sufficient to pay all expenses, including a deficit from the preceding year, and to leave a balance of $574 for use in repairs and small changes next summer.

The titles of the papers published during the year by members of the Division having been fully recorded in the *University Gazette*, they are not reprinted here.

IRA N. HOLLIS.

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# THE PSYCHOLOGICAL LABORATORY

To the President of the University: —

Sir, — The work of the Psychological Laboratory has been carried on during the last year in the traditional lines. The only new systematic effort has been the creation of a department in the laboratory devoted to applied psychology. This led at the end of the year to the appointment of a special assistant for applied psychology. We understand by applied psychology inquiry into the practical help which experimental psychology can give to the various professions and industries, especially to the work of the teacher, of the lawyer, and of the physician, but hardly less to that of the worker in commerce and industry, in art, in social reform, etc. The aim is thus the development of a science which is related to psychology as engineering is related to physics. The Harvard Laboratory is the first one which approaches this new field in a systematic way. It is hoped that this branch of the work will lead to a similar relative independence to that which our department for animal psychology in the laboratory has reached in the last years; and the success of which has found its acknowledgment from the side of the University in the promotion of Dr. Yerkes to an assistant professorship.

Most of the investigations which have been carried on in the laboratory belong, of course, to general psychology. I mention the following researches of graduate students which were carried on with a large number of subjects. Mr. Bingham analyzed The Psychical Structure of Musical Melody by examining the influences which the parts of the melody have on rhythmical movements. Another psycho-aesthetic investigation was that of Miss Davis, dealing with The Psychical Values of the Divisions of a Vertical Line, an experimental inquiry which had immediate reference to painting and architecture. A very extensive investigation was that of Mr. Frost on The Correlation of Individual Differences, the most comprehensive study of the question as yet undertaken. Miss Kate Puffer studied the individual differences of men in the particular field of Psychophysical Fluctuations, especially the fluctuations of attention, of memory, of reaction, etc. Mr. Ricker started with the very promising topic of The Field of Voluntary Inhibition of Ideas. Mr. Starch examined by galvanometric methods The Influence of Emotion on the Glands. Mr. Tait began a comprehensive study of The Organization of Memory Ideas and its Dependence upon Outer Conditions. Mr. Nelson worked on



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The Temporal Relations of Feelings. Every one of these studies is intended as a doctor's dissertation, with the exception of that of Mr. Starch, who entered the laboratory with the doctor's degree.

From the field of animal psychology, I may mention Mr. Breed's painstaking inquiry into The Mental Development of the Chick, and the important investigation of Mr. Haggerty on The Imitative Tendency of Monkeys. On account of the richer material, this investigation has been concluded during the summer vacation in the New York Zoölogical Park, with the apparatus of the Harvard Laboratory and with the courteous assistance of the Director, Dr. William T. Hornaday. Other animal investigations were those of Mr. Dodson on The Relation of Intensity of Stimulus to Modifiability of Behaviour in the Mouse, and of Dr. Hamilton on The Reaction Types of Mammals.

From the work of instructors I mention the optical studies of Professor Holt, which referred especially to color vision and to the blind spot, and the studies of Professor Yerkes, who tested the mental functions of the dancing mouse and reëxamined the methods of testing the color vision of animals. My own researches during the last year belonged especially to problems of applied psychology with reference to medicine and law.

The training course in experimental psychology of Professor Holt and the courses in animal psychology, as well as the Summer School courses in the laboratory, were well attended. The interest in elementary experimental psychology exceeded the seating capacity of the largest lecture room in Emerson Hall. The equipment of the laboratory has been greatly enriched by a number of new instruments, especially electrical instruments, the breeding equipment in the animal department, etc. In April, the laboratory was the meeting place for the American Society of Experimental Psychologists. The visitors had ample opportunity to inspect all the details of our work and we all profited much from their kindly criticism.

The only great need of the laboratory is a considerable gift which would secure the regular printing of the investigations in form of new volumes of the Harvard Psychological Studies. There is a danger that the work of last year will be scattered in various places of publication because so far we lack the means to put the printing of our studies, of which two large volumes have so far appeared, on a secure financial basis.

HUGO MÜNSTERBERG,
*Director of the Psychological Laboratory.*

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# THE OBSERVATORY

To the President of the University: —

Sir, — The distinctive feature of the work of the Harvard College Observatory during the last year has been publication. Stimulated by the gift of Mr. Fairchild, and by the introduction of the monotype, both of which are mentioned in the last annual report, the publications of the last twelve months exceed in amount those of the first thirty years following the establishment of the Observatory. No less than six volumes of the Annals have been completed, and good progress has been made with several others. The greatest need of the Observatory now becomes the continuation of this work, by completing and printing the large amount of material still unfinished. Delay may diminish its value, and render those who have taken part in it less able to complete it than at the present time. The organization of the Observatory is such that this work could now be carried on rapidly and to much better advantage than later. The sum of five thousand dollars annually, for five years, would fulfil this need very satisfactorily, and would secure and place in permanent shape an amount of valuable material quite out of proportion to that which could be obtained by ordinary methods. The second need, that of a fireproof building for the library, remains as urgent as before.

The conflagration which destroyed a large part of the City of Chelsea, last spring, shows that the best protection from such a disaster is a large open space. The grounds of the Botanic Garden and Observatory form such a space, a quarter of a mile long, and an eighth of a mile wide. Many small fires occur in the district northwest of the Observatory, which, with a strong wind like that which prevailed during the Chelsea fire, might destroy a large part of the City of Cambridge, were it not that it could not pass the open space just mentioned. The local fire department of the Observatory, on more than one occasion, has prevented a serious fire, and the establishment of a fire lane across the grounds may be worthy of consideration.

*East Equatorial.* — The observations with the 15-inch East Equatorial have been made by Professor O. C. Wendell, and have been of the same general character as in previous years. Fourteen thousand photometric comparisons have been made, principally with



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the polarizing photometer with achromatic prisms. A large part of these measurements relate to stars of the Algol type, and serve to determine their light curves and times of minima. Measurements for determining the correction to the period have also been made, when the light was varying most rapidly. Observations of several other known variables, not of the Algol type, have also been made. Many stars, whose variability is doubtful, have been observed, since the accuracy of the measurements made with this instrument permits even slight changes to be detected with certainty. At the request of Professor Schlesinger, Director of the Allegheny Observatory, a special series consisting of 1760 measurements on 51 nights, was made of the variable star u Herculis. As a result, the star was found to be of the $\beta$ Lyrae type, with a period of 2.0535 days. About thirteen hundred measurements have been made of the light of the asteroids, Iris (7) and Eros (433), with the result that they apparently do not vary at the present time. Measurements of 32 stars having spectra of the fourth type have been continued. About nine hundred measures have been made, and the variation in light previously detected in several of these stars has been confirmed.

With a second photometer, adapted to the measurements of adjacent objects, twenty-seven hundred measurements of double stars have been made. Twenty-two eclipses of Jupiter's satellites have been observed photometrically, making 859 in all.

*Meridian Circle.* — The reduction of the observations of the stars in the Zone $-9°\,50'$ to $-14°\,10'$ is nearly completed. The corrections depending upon the adopted constants of reduction for the zone stars have been applied to all the zone observations. Nearly all of the results for right ascension and declination have been copied into the manuscript of the zone journal, and more than one quarter of them have been entered in the final ledger. The comparison of the results for the three sections of the work is nearly complete. Various tests of the correctness of the manuscript tables used in the computation, and of the separate computations themselves, have also been made, and the errors thus discovered have been corrected.

It is not probable that the instrument will be used in its present condition, for any large piece of work. It should be remounted in a separate building, a transit micrometer attached to it, and other changes made. Accordingly, the two 8-inch collimators have been replaced by smaller instruments. One of them has been mounted so that it is pointed to the South Pole, and a mirror reflects into it the stars to be observed. The second has been placed on a simple

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equatorial mounting, and will shortly be loaned to Professor A. E. Douglass, of the University of Arizona.

*Meridian Photometers.* — The work laid out for the 2-inch and 4-inch Meridian Photometers has now been completed, the observations exceeding a million in number. The Revised Harvard Photometry, H. A. **50**, containing the photometric magnitudes observed here and elsewhere of 9,110 stars of the magnitude 6.50 and brighter, has been distributed, and is in the hands of astronomers. The insertion of the spectra of these stars has led to some important conclusions, which will appear in the discussion now in preparation. H. A. **54**, containing the magnitudes of 36,682 stars, fainter than the magnitude 6.50, has been completed and will be distributed shortly. The results of the entire work extending over thirty years are thus rendered readily accessible. It may be of interest to state that the latter volume which involved the writing of forty-one thousand cards was planned, prepared, and printed, during the twelve months covered by this report.

With the 12-inch Meridian Photometer, 60,208 settings have been made by the Director, on 135 nights. In all, 674,112 settings have been made with this instrument during the last ten years. The completion of the work laid out for it, and the continued delay in finishing the mounting of the 60-inch Reflector, permitted certain other investigations to be undertaken with it. Accordingly, observations have been made of the stars north of declination — 25° which are contained in only one of the earlier photometric volumes, and of a long list of miscellaneous stars.

### Henry Draper Memorial

The number of photographs taken with the 11-inch Draper Telescope is 432, making 17,467 in all; with the 8-inch Draper Telescope, 657, making the total number 35,543. The entire number of photographs of the stars taken at Cambridge during the year is 4,100. Six eclipses of Jupiter's satellites and two occultations of stars have been successfully photographed with the 11-inch Draper Telescope. H. A. **56**, No. IV, has been completed, and contains a detailed classification of the spectra of 1,477 stars north of declination — 20°, photographed with the same instrument. The spectra of 291 southern stars, taken with the 13-inch Boyden Telescope, have also been classified. The detailed study of the spectra, contained in H. A. **28**, is thus being extended to fainter stars.

Mainly from the study of the photographs of spectra taken with the 8-inch Draper, 8-inch Bache, and 24-inch Bruce Telescopes,

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Mrs. Fleming has found 25 new variable stars, 2 stars of the fourth type, 2 of the fifth type, 2 gaseous nebulae, and 4 stars in which the spectrum is peculiar, showing a characteristic dark band, extending from the approximate wave length 464 to 473, and other dark bands near Hδ and Hγ. From this examination, 49 stars in all having this spectrum have been found here, and, so far as is now known, none have been found elsewhere. Of the 25 new variables, 12 have spectra of the third type having also bright hydrogen lines, and 7 have spectra of the fourth type. The hydrogen lines have been found to be bright in 6 known variable stars, *134459*, Y Cephei, T Arietis, R Comae Berenicis, R Y Ophiuchi, and Z Pegasi. The spectrum of R U Virginis is peculiar, and appears to resemble that of V Crucis which is of Class R, having also the hydrogen lines Hγ and Hβ bright. Six meteor trails were found on chart plates. Much work has been done in completing the classification of stars contained in H. A. **50**, too faint to be photographed with large dispersion. Chart plates of the regions of about one hundred variable stars have been selected and enlarged to a scale of $20'' = 0.1$ cm. These variable stars have been identified and marked on paper prints, thus furnishing good maps, covering a square degree, for visual observers of variables, in both hemispheres. This work has been in progress for several years, and we have thus good photographic charts of the regions of 345 variable stars. Three new variable stars have been found by Miss S. E. Breslin, and one star having the line Hβ bright in its photographic spectrum was found by Mr. E. S. King.

A series of investigations, made by Mr. King, is in course of publication in H. A. **59**. It includes a study of photographic photometry on an absolute scale, and the effect of temperature, moisture, and other sources of error; the light of the Moon at different phases, of the bright stars, and of other objects have also been measured.

### Boyden Department

The Arequipa Station has remained in charge of Mr. R. H. Frost, the senior assistant there. The number of photographs taken during the year, with the 13-inch Boyden Telescope, is 374, making 12,221 in all; with the 8-inch Bache Telescope, 1,465, making 39,689. The total number of stellar photographs taken during the year is 3,509. The number of settings with the Meridian Photometer was 5,392; with the Rumford Photometer, 300; with the Double-Star Photometer, 624; total 6,316. 146 observations have also been made of 50 southern variables of long period. Meteorological

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observations, three times a day, have been continued as in former years, and visual observations of the cloudiness have been made hourly throughout the year, and show that the amount of cloud has been unusually large.

### Bruce Photographic Telescope

The number of photographs taken with the 24-inch Bruce Telescope was 568, of which 8 were spectrum plates, 11 were charts having exposures of four hours, 43 of two hours, and 161 of one hour. The total number of photographs, so far taken with this instrument, is 9,081. The plates having exposures of two hours had for their centres the special regions selected by Kapteyn, and 12 of them have been sent to him for measurement, with the understanding that they are to be returned on the completion of that work. The discovery of new nebulae, from the Bruce plates, has been continued by Professor Bailey, who has found 1,932 of these objects of which the positions of 515 have been determined. From an examination of the region of Nova Sagittarii, Miss Leavitt has found 22 variable stars.

### Blue Hill Meteorological Observatory

The work of the Blue Hill Meteorological Observatory continues under the direction and at the expense of Professor Rotch, with the same permanent staff as in preceding years. He has also replaced the stone tower built by him in 1884, at a cost of about $5,000. This structure is not only proof against water and fire, but is larger, and the third story commands an unobstructed view of the horizon.

Besides the regular observations, records of atmospheric pressure, temperature, relative humidity, and wind-velocity were obtained during 21 kite-flights, mostly on the international days. The mean height attained was 5,525 feet above sea-level, and the maximum height in any flight, 11,713 feet. As mentioned in last year's Report, a final series of *ballon-sonde* ascensions was made at St. Louis during the autumn of 1907, with the aid of a grant from the Hodgkins Fund. Of the 21 balloons despatched by Mr. Fergusson, all but two of the attached instruments were recovered. The mean height for the 18 ascensions, in which the temperature was recorded, was 35,645 feet, the maximum height being 54,590 feet. An important result of the 77 *ballons-sondes* sent up from St. Louis during the past four years is the demonstration of the permanent warm current, at an altitude of about nine miles above the centre of this

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continent, which exists at a lesser height in Europe. Four *ballons-sondes* were also despatched from Pittsfield, Mass., in 1908, but only one of these instruments was recovered.

## Miscellaneous

*Variable Stars.* — The visual observations of the long period variables have been maintained throughout the year, the working list comprising nearly the same stars as last year. Mr. Campbell has made 1,741 observations of them with the 24-inch reflector, and 918 mainly with the 5-inch telescope, including observations of those variables which are visible only during the latter part of the night. Miss Cannon has made 264 observations with the 6-inch West Equatorial. 1,106 observations have been communicated to the Observatory, of which 634 have been received from Miss Ida Whiteside of the Whitin Observatory, 217 from Miss A. S. Young of Mt. Holyoke College, 169 from Professor Whitney of Vassar College, 52 from Mr. F. E. Seagrave, and a few from other observers. The total number, including 287 observations of fifty southern variables, made at Arequipa, is 4,316. The approximate magnitudes of these variables, for the first of each month, compiled by Mr. Campbell, have been published in Popular Astronomy as in previous years. The comparison stars for 252 variables of long period have been printed in H. A. **57**, Part II, thus furnishing positions and magnitudes on a uniform photometric scale of 3,734 stars, many of them as faint as the thirteenth magnitude.

The continuation of the search for variable stars, over the entire sky, according to a uniform plan, has been continued. Regions 24, 27, 30, 33, 36 and 42 have been examined by Miss Leavitt, and 56 new variables found. Regions 4, 13, and 43 have been examined by Miss Cannon, and 39 new variables found. Regions 32, 44, and 53 have been examined by Miss Leland, and 14 new variables have been found. The number of variable stars discovered at this Observatory during the year is 166, making in all 3,157 first found here.

*Observatory of the Rev. J. H. Metcalf.* — During the past year, Mr. Metcalf and his assistant have taken 206 photographs with the 12-inch doublet and an equal number of $4 \times 5$ plates, with the 6-inch doublet of short focus. Both instruments were constructed by him. A few chart plates of special objects have been obtained, some of them with long exposure, but the greater portion were taken for the discovery of new asteroids. On each plate two exposures of 30 minutes were made following on a star but giving a motion to the plate equal to the average motion of an asteroid. Stars appear

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as two short trails, but an asteriod is shown as two nearly circular dots, and is thus easily recognized even if very faint. 48 new asteroids have been discovered in this way, and 16 of them have been followed for a sufficient time to assure good orbits. 175 asteroids, in all, have been photographed and measured. A number of photographs of comets have been taken, including early photographs of Morehouse's Comet, and one variable star, probably of the SS Cygni type, has been discovered.

*Library.* — The Library of the Observatory has been increased by 337 volumes and 2,497 pamphlets. The total numbers of volumes and pamphlets in the Library on October 1, 1908, were 12,561 and 27,722, respectively. This collection, one of the finest of its kind in the world, is in constant danger of destruction by fire, and is scattered through the rooms of the Observatory. A suitable building to contain it is still one of our greatest needs.

*Telegraphic Announcements.* — Twenty-five telegraphic announcements have been issued. Of these, eight were received from Kiel, four from the Lick Observatory, three from the Students' Observatory, Berkeley, Cal., two from the U. S. Naval Observatory, two from the Yerkes Observatory, one each from Professors Comstock, Lowell, and Morehouse, one from Mr. Metcalf, and two originated here. The syllabic code, devised by Mr. Gerrish, has continued to give entire satisfaction. For this, no code book is required, and a pamphlet furnishing all necessary information will be sent gratuitously, on application. Announcements will be received at this Observatory by telegraph, preferably according to this system, for transmission to Kiel, and for distribution in America. The Astronomische Centralstelle, at Kiel, is prepared to receive announcements in the same system, from other countries than Europe.

Cablegrams intended for this Observatory should be addressed "Observatory, Boston"; and all telegrams, "Harvard College Observatory, Cambridge, Mass." All correspondence relating to telegrams should be addressed to the Director.

These telegrams continue to be supplemented by neostyle bulletins which are printed as soon as the telegrams have been sent off, and distributed by first-class mail. Translated messages together with additional information are thus promptly circulated. 32 bulletins, making 338 in all, have been distributed in this way.

*Publications.* — Nine portions of volumes of the Annals have been printed and distributed during the year. H. A. **49**, Parts I and II; **50**; **57**, Part II; **59**, No. 1; **60**, Nos. 6, 7, and 8; **61**, Part I. The whole of H. A. **54**; **56**, No. 4; **58**, Part III; **59**, No. 2; **60**, No. 9;

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and **64**, No. 1, are in type and will be distributed shortly. It therefore appears that six volumes, H. A. **49**, **50**, **54**, **57**, **58**, and **60**, have been completed this year. Good progress has also been made in the preparation and printing of several other volumes. Accordingly, the completed volumes are **1** to **51**, except **47**, and also **53**, **54**, **57**, **58**, and **60**. Also **47**, Part I; **52**, Part I; **55**, Part I; **56**, Nos. 1, 2, 3, and 4; **59**, Nos. 1 and 2; **61**, Part I; **62**, Part I; **64**, No. 1.

The form of the tables and text of the earlier volumes of the Annals was adopted with the advice and personal supervision of such experts as Messrs. Bigelow and Wilson, and their works on typography are followed as standards. While these precedents are maintained in the preparation of the Annals, so far as possible, much difficulty has been found in inducing some of those taking part in this work to recognize the importance of uniformity, of typographical appearance, and of artistic effect.

Twelve circulars have been published during the year; but as their numbers, titles, and dates have been fully recorded in the University Gazette, they are not repeated here.

EDWARD C. PICKERING, *Director*.

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# THE MUSEUM OF COMPARATIVE ZOÖLOGY

To the President and Fellows of Harvard College: —

Thirteen courses in Zoölogy were given during the academic year 1907–08 by Professors Mark, Parker, Castle, Jackson, and Dr. Rand to two hundred and twenty-four students in Harvard University, and nine courses were given to thirty-nine students of Radcliffe College. Messrs. Thomas Barbour, E. D. Congdon, E. C. Day, G. F. Hargitt, F. H. Lahee, R. C. Mullenix, S. C. Palmer, and A. S. Pearse assisted in the University courses, and Messrs. Manton Copeland, W. B. Herms, and J. A. Long in the courses in Radcliffe College.

The Virginia Barret Gibbs Scholarship was held by Mr. G. F. Hargitt. Two students, working at Woods Hole and at the Bermuda Biological Station for Research, received aid from the Humboldt Fund.

In the Department of Geology and Geography, the instruction was given by Professors Jackson, Ward, Woodworth, Johnson, and Dr. Mansfield, assisted by Messrs. Augustus Cobb, J. W. Eggleston, F. H. Lahee, and B. M. Varney. Nineteen courses were taken by three hundred and sixty-nine students of Harvard University and three courses were taken by twelve students of Radcliffe College.

The income derived from the Josiah Dwight Whitney Scholarship Fund was shared by Messrs. Sedgwick Smith, G. B. Roorbach, and W. G. Reed, Jr.

For an addition to its invested funds, the Museum is indebted to the generosity of Miss Maria Whitney, who has given the sum of $5,000, the income of which can be applied to the care (binding) and increase of the Whitney Library. It will be recalled that the Whitney Library contains a large and serviceable series of geological works brought together in great part by Miss Whitney's brother, Josiah Dwight Whitney, Sturgis-Hooper Professor of Geology from 1875 to 1896. The Whitney Library is rich in serials, in the publications of governmental surveys, and in the writings of the early masters of geology. The Maria Whitney Fund assures an annual increase to this valuable series of books.

Miss Mary Dandridge Peck has given the Museum some most interesting memorials (original letters and drawings, together with a large crayon likeness) of her grandfather, William Dandridge Peck,



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America's first scientific entomologist, and Harvard's first Professor of Natural History (1805–22).

From Dr. P. R. Uhler, the Museum has received the Meyer Dür series of European Hemiptera. This collection contains a very large number of species determined by Dr. Franz Fieber, and has been studied critically by Dr. Uhler himself. Dr. Uhler's gift is an important one and emphasizes a most precious asset of the Museum, namely, the constancy with which the assistants and students of the Museum's Founder contribute valuable research material to its stores.

Another gift of great scientific value has been received from Dr. George W. Peckham and Mrs. Elizabeth G. Peckham; it consists of a considerable number of Attidae (jumping spiders), including the types of most of the species described by the Peckhams, the acknowledged authorities on this group of animals.

Miss Elizabeth B. Bryant has most kindly given her large series of spiders, principally from New England and New York; this series is fully identified and most carefully labeled. The Menge, Keyserling, Emerton, Peckham, and Bryant collections of spiders constitute a series of specimens that cannot be overlooked by future students.

Among the many collections most generously given the Museum by Mr. John E. Thayer, especial mention should be made of the series of mammals from Lower California and the first instalment of mammals from central and western China.

Mr. Thomas Barbour's collections from India, Burmah, the Dutch East Indies, and New Guinea have enriched the Museum's study series of specimens in every Department, and to his generous interest the Museum is indebted for many other desirable additions. Among the more notable of these, mention may be made of a valuable series of skins of birds of paradise and of a number of magnificent specimens of the great bird-winged butterflies (*Ornithoptera* spp.).

Another series of Icelandic birds due to the kind initiative of Messrs. J. W. Hastings and L. J. de G. de Milhau has been received. These birds, mounted by Rowland Ward, are excellent examples of modern taxidermy, and make a most interesting exhibition of the avifauna of an ancient continental island. It is with sincere regret that the death of Mr. Hastings in New York on April 26, 1908, is recorded. Mr. de Milhau writes that he will continue the collection as heretofore in the joint names of Mr. Hastings and himself.

Dr. William Lord Smith has sent to the Museum a number of mammalian heads and horns; many of these will be utilized for exhibition. From Dr. Smith the Museum has also received a fine male Woodland Caribou (*Rangifer caribou*) which Mr. Nelson has mounted

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for the North American collection. Mr. Nelson has mounted most effectively a Grant's Caribou (*Rangifer granti*) from Alaska, a gift of Mr. Francis T. Colby, to whom the Museum is indebted furthermore for a crocodile from Ceylon and for some specimens (skulls and skins) of three species of Alaskan bears.

The New York Zoölogical Society, through its Director, Dr. W. T. Hornaday, and its Curator of Reptiles, Mr. R. L. Ditmars, has continued to place the Museum under deep obligations by its gifts; from them we have received a specimen of the remarkable African tortoise, *Cinyxis erosa*, and two large monitors, *Varanus salvator* (with skeleton) from Ceylon, and *V. niloticus* from Angola, West Africa, all prepared for exhibition by Mr. Nelson.

The Museum is also indebted to Dr. R. T. Jackson for some rare and interesting fossils; to Professors W. E. Castle and C. B. Davenport, and to Mr. Arthur Perrin, for specimens for the collection of animals under domestication, and to Mr. Charles Bullard for a collection of fresh-water sponges.

The extensive series of bones of the Great Auk, obtained last year from Mr. William Barbour's gift for present use, have been sorted over in part, and several complete skeletons have been mounted most successfully by Mr. Michael Reitz. It is hoped that these skeletons can be exchanged with other Museums.

From the American Museum of Natural History the Museum has received, in exchange, a series of Hawaiian corals named by Dr. T. Wayland Vaughan.

A fine example of Weddell's Seal, captured during the stay of the "Scotia" (Scottish National Antarctic Expedition, William S. Bruce, Leader) in the Antarctic regions, has been purchased for the Pacific Room; by purchase, the Museum has also acquired some hydroids specially prepared for exhibition and a series of fossils from the Carboniferous of Belgium.

Owing to illness, Professor K. Mitsukuri has been obliged to relinquish the preparation of a report on the holothurians collected during the "Albatross" expedition to the Tropical Pacific. The collection has been returned to the Museum.

Exploration, one of the most legitimate functions of a University Museum, has been fostered, to the great advantage of science and of this Museum, by the scientific zeal and disinterestedness of the present Director of the University Museum, since the foundation of the Museum of Comparative Zoölogy, and two modest attempts in continuance of this policy have been undertaken during the present year by the Museum.

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Mr. George Nelson, of the Museum staff, visited Santo Domingo early in 1908 in search of the Agouta, *Solenodon paradoxus*, an insectivorous mammal known to science since 1832, and represented in the museums of but two institutions, by four specimens, all more or less imperfect. Mr. Nelson's efforts were most successful, for the Museum has secured an excellent series of this rare mammal, a series sufficient, it is hoped, to warrant a comprehensive memoir on the habits, structure, and affinities of the Solenodontidae.

In July, Dr. H. B. Bigelow made a short trip in the U. S. F. C. Schooner "Grampus" to the Gulf Stream. Dr. Bigelow's objects were, first, to study the fauna at intermediate depths; second, to compare the surface fauna of the warm waters of the Gulf Stream with those of the cold current; third, to test the efficacy of the Monaco Deep-sea trap, and lastly, to collect and preserve material.

From Martha's Vineyard the "Grampus" ran about 200 miles S.S.E., then 140 miles N.W., and finally about 150 miles N.E. Though the collections obtained were not large, some interesting material was preserved, and the other objects of the Expedition were successfully carried out. A report on the scientific results will be published later. Dr. Bigelow's coöperation enabled the Museum to undertake this work, and we have to thank the Hon. G. M. Bowers, U. S. Commissioner of Fisheries, for placing the "Grampus" at Dr. Bigelow's disposal, and also Dr. L. J. Cole, who served as assistant on the trip.

Owing to the smallness of its staff, the Museum engages, from time to time, assistants for the care and arrangement of its study series of specimens.

During the year, Miss E. B. Bryant was employed for two months, and under Dr. Faxon's supervision arranged, catalogued, and labeled a considerable number of land shells.

Mr. A. P. Morse was engaged for one month, and worked over, more or less critically, the Museum's collections, including the S. H. Scudder series, of Forficulidae (earwigs) and Blattidae (roaches).

Dr. G. M. Allen's services were secured for three days each week for nine months and were given chiefly to the mammalian osteological collection. All the skeletal parts of the orders Primates, Chiroptera, Insectivora, Carnivora, and Rodentia have been identified, catalogued, labeled, and arranged by Dr. Allen, who has also studied critically the entire series of the Chiroptera. Notes on some of the more interesting forms, with descriptions of five new ones, have been published (Bull. M. C. Z., Vol. 52, No. 3) as a result of Dr. Allen's work.

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The Museum is indebted to Messrs. Faxon, Brewster, Woodworth, Bangs, and Bigelow for their interest in the collections entrusted to their care, and also to Mr. R. W. Sayles, who makes his first report as Assistant in Charge of the Geological Collections open to the Public.

Of the more important additions to the collections on exhibition made during the year, mention may be made of the four massive corals from the Great Barrier Reef of Australia, which are shown in a new floor case next the Bora Bora model in the room devoted to the systematic collection of polyps. These specimens are a part of the fine series made some years ago by the late Professor H. A. Ward and given to the Museum by Mr. Agassiz. It is proposed to exhibit other specimens of Australian reef-building corals from this same source, in the adjacent wall case.

Several North American mammals have been added to the collection on exhibition, as a result of Dr. H. B. Bigelow's zeal and Mr. Nelson's skilful taxidermy. A number of heads and horns of some typical forms of hoofed Mammalia have been mounted by Mr. Nelson and are hung on the walls of the entrance Hallway.

Through the kind interest of Professors J. B. Woodworth and C. H. Hitchcock the Museum has obtained a large slab of Potsdam sandstone, showing the tracks of the enigmatical animal known as *Climatichnites wilsoni*. The slab is from Mooers, N. Y., and is installed in the entrance Hallway.

New cases have been built in the Hallway, in the Pacific Room, in the Coral Room, and in the rooms devoted to the Systematic collections of mammals and of fishes.

A rearrangement of the Systematic collection of fishes on exhibition has been begun; for the Synoptic collection of fishes the rearrangement is completed. The arrangement of the collections in the room devoted to the Pacific Fauna has been changed; the vertebrates are displayed in the wall cases, the invertebrates in one of the floor cases, and in the second floor case are brought together characteristic vertebrates and invertebrates peculiar to the islands of the Pacific.

The Library consists of 44,558 volumes and 40,266 pamphlets; 1,040 volumes and 2,240 pamphlets have been added during the year.

Two numbers of the Memoirs, fifteen numbers of the Bulletin, and the Annual Report, a total of 578 (78 quarto, 500 octavo) pages, with 59 (15 quarto and 44 octavo) plates, have been issued. The two Memoirs and three of the Bulletins contain reports on the scientific results of explorations carried on under Mr. Agassiz's

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direction, one Bulletin contains a report upon the "Albatross" Echini collected in 1906, one Bulletin is a Contribution from the Zoölogical Laboratory, three Bulletins are Contributions from the Geological Laboratory, and seven Bulletins are reports upon various Museum collections.

The Corporation has continued its appropriation of $350 to further the publication of Contributions from the Zoölogical and Geological Laboratories.

SAMUEL HENSHAW.

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# THE ZOÖLOGICAL LABORATORY

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — During the academic year 1907–08 the following changes have taken place in the Department of Zoölogy. Assistant Professor Castle has been promoted to a full professorship. A professorship of Economic Entomology has been established and the chair has been filled by the appointment of Dr. William Morton Wheeler. By the assignment of an additional Austin Teaching Fellow to the Department it has been possible so to arrange the work that Dr. Rand will have more time for research and the opportunity to offer an advanced course in a subject in which he is especially interested — "Morphogenesis. The Dynamics of Development and Growth." An Instructor in Entomology is also to be added to the staff. The great advantage secured by these changes and additions is the increased amount of time which will be given to original investigations, especially by Professors Wheeler and Castle.

As in previous reports, the first of the accompanying tables exhibits the number of students attending each of the courses in Zoölogy offered during the year. The numbers printed in italics refer to students in the Lawrence Scientific School and in the Graduate School of Applied Science. The second table gives corresponding information relative to Radcliffe College.

TABLE I

| Courses, 1907–08. | Grad. | Senior | Junior | Soph. | Fresh. | Special | Bussey | Total |
|---|---|---|---|---|---|---|---|---|
| Zoölogy 1 . . . . | 4 | 5 | 13 | 19 | 42 | 8 | . . . | 91 |
| " 2 . . . . | 2 | 2 | 8 | 11 | 6 | 3 | . . . | 32 |
| " 3 . . . . | 5 | 6 | 4 | 3 | . . . | 1 | . . . | 19 |
| " 4 . . . . | 4+*1* | 2 | 2 | 2 | . . . | 1 | . . . | 12 |
| " 6 . . . . | 5+*1* | 1 | 2 | . . . | . . . | 1 | . . . | 10 |
| " 9*a* . . . . | 5 | . . . | . . . | . . . | . . . | . . . | . . . | 5 |
| " 11*a* . . . . | 1 | . . . | 2 | 3 | . . . | . . . | . . . | 6 |
| " 11*b* . . . . | 2 | 1+*1* | 2 | 4 | . . . | . . . | . . . | 10 |
| " 11*a* & 11*b* lect. | 5+*1* | 1 | . . . | 2 | . . . | . . . | 1 | 10 |
| " 13 . . . . | 8 | 1 | . . . | . . . | . . . | . . . | . . . | 9 |
| " 15 . . . . | 9 | . . . | . . . | . . . | . . . | . . . | . . . | 9 |
| " 20*a* . . . . | 7 | . . . | . . . | . . . | . . . | . . . | . . . | 7 |
| " 20*c* . . . . | 3 | . . . | . . . | . . . | . . . | . . . | . . . | 3 |
| " 20*e* . . . . | 1 | . . . | . . . | . . . | . . . | . . . | . . . | 1 |
| Sums . . . | 61+*3* | 19+*1* | 33 | 44 | 48 | 14 | 1 | 224 |



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TABLE II

| Courses, 1907–08. | Grad. | Sen. | Jun. | Soph. | Fresh. | Special | Total |
|---|---|---|---|---|---|---|---|
| Zoölogy 1 . . . . . | . . . | 3 | 6 | 2 | 7 | 2 | 20 |
| " 2 . . . . . | . . . | . . . | 1 | . . . | 1 | 1 | 3 |
| " 3 . . . . . | 1 | 1 | . . . | 2 | . . . | . . . | 4 |
| " 4 . . . . . | 2 | . . . | . . . | 1 | . . . | . . . | 3 |
| " 6 . . . . . | 2 | . . . | . . . | . . . | . . . | . . . | 2 |
| " 9*a* . . . . . | 1 | . . . | . . . | . . . | . . . | . . . | 1 |
| " 11*a* & 11*b* lect. | 1 | . . . | . . . | . . . | . . . | . . . | 1 |
| " 15 . . . . . | 2 | . . . | . . . | 1 | . . . | . . . | 3 |
| " 20 . . . . . | 2 | . . . | . . . | . . . | . . . | . . . | 2 |
| Sums . . . . . | 11 | 4 | 7 | 6 | 8 | 3 | 39 |

Except for changes due to the alternation of courses in successive years, there was no difference between the courses offered during this and the preceding year. Assistant Professor Castle's courses 11*a* and 11*b* were, however, transferred from the group "Primarily for Graduates" to the middle group, "For Graduates and Undergraduates," thus restoring them to the place they had previously held. The research courses were more specifically described than in previous years, each instructor naming the subjects in which he was willing to receive research students.

Instruction in the individual courses was not materially altered from that given in 1905–06, except for the usual changes necessitated by the development of the subject.

Zoölogy 1 was conducted by Professor Parker, who had as chief assistant Mr. A. S. Pearse, and as sub-assistants Messrs. E. C. Day, R. C. Mullenix, and S. C. Palmer. In the corresponding course in Radcliffe College the laboratory assistant was Mr. W. B. Herms.

Zoölogy 2 was given, as for some years past, by Assistant Professor Castle. The chief assistant in the course was Mr. E. D. Congdon. Mr. E. C. Day also assisted six hours a week. The assistant in this course in Radcliffe was Mr. J. A. Long.

The lectures in Zoölogy 3 were attended by three students not enrolled in the course. The chief assistant to Dr. Rand in this course was Mr. G. T. Hargitt. Mr. Thomas Barbour also assisted three hours a week. The assistant in the Radcliffe course was Mr. Manton Copeland. The similarity of a part of the laboratory work in this course and in Hygiene 1 suggests the desirability of correlation between the two courses with a view to avoiding repeti-

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tion on the part of students who take both courses. Several anatomical preparations, made with the help of Mr. M. Reitz, were added to the laboratory collection.

The enrolment in Zoölogy 4 was rather larger than usual, and the lectures were attended by two students not enrolled. The course was conducted as in previous years, the laboratory work being in charge of Dr. Rand.

In the lectures in Zoölogy 6 most attention was given to the development of the central nervous system. The laboratory was in charge of Dr. Rand, who succeeded in covering thoroughly more ground than during the first year in which the course was given. Three graduate students not enrolled attended the lectures.

Zoölogy 9*a* was given by Assistant Professor Jackson to five graduate students. Mr. F. H. Lahee assisted in the laboratory work. By special permission one graduate student in Radcliffe College was allowed to take the course.

Students were allowed to take the lectures without the laboratory work in Assistant Professor Castle's courses, Zoölogy 11*a* and 11*b*, the two half-courses together counting under this arrangement as a half-course. As shown in Table I, ten students availed themselves of this privilege. Likewise one student in Radcliffe College was allowed to attend the lectures under the same conditions. The laboratory work in these two half-courses consisted largely in breeding experiments with small mammals, and certain of the results will be incorporated in future publications.

Zoölogy 13 was given by Professor Parker on the same general lines as in 1905–06. The lectures were attended by two graduates who were not enrolled. Professor Parker also gave, as in former years, Zoölogy 15. The lectures were attended by three students who were not enrolled and did no laboratory work. The course was also repeated for three Radcliffe students. Of the laboratory topics assigned three furnished results that are to be prepared for publication. One Harvard student had as laboratory topic in this course the same subject that he was at work upon in Zoölogy 20*c* under Professor Parker.

Eleven graduate students were engaged in research, seven under direction of Professor Mark (Zoölogy 20*a*), three under Professor Parker (Zoölogy 20*c*), and one under Dr. Rand (Zoölogy 20*e*). Two of those enrolled in Course 20*a* presented theses which were accepted, passed the examinations, and received at Commencement in June the degree of Ph.D. The thesis of Manton Copeland was on "*Spermatogenesis in Apis and Vespa*," that of J. A. Long

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was on "*The maturation of the egg of the mouse.*" Of those enrolled in 20c one presented a thesis which was accepted, and the two others presented theses, passed the examinations and received in June the degree of Ph.D. The thesis of R. C. Mullenix was on "*The peripheral terminations of the eighth cranial nerve in vertebrates, especially in fishes,*" that of A. S. Pearse was on "*The reactions of amphibians to light.*"

All other students in research courses made satisfactory progress with their work.

During the summer of 1908 two students received aid to the extent of $140 from the Humboldt Fund while working at the Bermuda Station, and two received aid, $35, while working at Woods Hole.

The Bermuda Biological Station for Research was open from June 18 till August 5 inclusive. For two weeks Dr. Rand was in charge; for the remainder of the time, Professor Mark. Seven persons were enrolled and some of the results of studies carried on are already in press; others will appear later in connection with work done in the laboratory in Cambridge.

There has been installed in the basement a motor generator, which is actuated by the 500-volt direct current already introduced into the aquarium room, and furnishes a direct current of about 100 volts suitable for experimental work in which the alternating current could not be employed, and for running projection lanterns already ordered to be installed the coming year.

Professor Mark received grants from the Carnegie Institution of Washington to the amount of $400 to aid in investigations already begun.

The Zoölogical Club held twenty-eight meetings on the afternoons of Fridays with an average attendance of twenty-two. At these meetings twenty-five original papers were presented and a number of others were reviewed. The subjects to be presented or discussed were usually announced in the *University Gazette*.

The titles of the publications by members of the Department during the past year having been fully recorded in the *University Gazette*, they are not reprinted here.

E. L. MARK, *Director*.

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# DEPARTMENT OF GEOLOGY AND GEOGRAPHY

To the President of the University: —

Sir, — As Chairman of the Department of Geology and Geography I beg to submit herewith my report for the year 1907–08.

The total enrolment of students in the courses given in this Department was 369, an increase of 54 over the preceding year. To the former number might perhaps be added 6 students who were enrolled in Mining 28 *½f.*, a course given by Dr. G. R. Mansfield in the Geological Museum. The Departmental staff remained the same as last year, except that Professor Davis was excused from teaching. Messrs. J. W. Eggleston, Augustus Cobb, F. H. Lahee, and B. M. Varney served as assistants. Details regarding the courses of instruction will be found in the accompanying reports of the several officers.

The two events of most importance in the activities of the Department during the year were (1) the installation of the seismograph, and (2) the sending of the Shaler Memorial Expedition to South America.

The Bosch-Omori 100 kilo. seismograph or "tromometer," referred to in last year's Report, arrived in Cambridge at the end of 1907, but owing to numerous delays was not completely installed and in operation until April 8, 1908. The instrument is mounted on an L-shaped concrete pier whose base rests on undisturbed stratified sand of glacial origin overlying clay of unknown depth. While the depth is not known it probably equals, if it does not exceed, 50 feet. The two arms or components of the tromometer stand N. 3° E. and N. 93° E. respectively, according to a determination of the meridian passing through the station. The latitude and longitude of the station, determined by comparison with the position of the astronomical laboratory, are as follows: Lat. 42° 22′ 36″ N., Long. 71° 06′ 59″ W. from Greenwich. The altitude of the pendulums as compared with the local contour of the city engineer's map is provisionally determined as 7 meters above mean sea-level. A brief account of the station has been published in *The Harvard Bulletin* for April 29, 1908.

The first distinct earthquake record was obtained on the morning of May 15, 1908, at 3*h.* 39*m.* 43*s.* as indicated by the north-south component. The east-west component did not record the trembling



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until 3*h*. 47*m*. 5*s*. The time of maximum motion was 3*h*. 45*m*. 35*s*.; and the end of the record came at 4*h*. 19*m*. 15*s*. The chief expense in the maintenance of the tromometer is likely to be the cost of the fixative solution for the smoked paper, and of the paper used for the records. In ordinary practice a skilful manipulator can change the records, fix the smoked paper, and adjust the pendulums in half an hour.

Arrangements have been made with Professor H. F. Reid, of Baltimore, Md., the American representative of the International Seismological Bureau, to report through him to that organization, but it is intended also to present for publication in the *Bulletin* of the Museum the results of earthquake study made at the station. The catalogues and special reports of the International Seismological Bureau have been received at the Geological Laboratory and are at present placed in Room 24 for reference. Professor Woodworth superintended the installation of the seismograph, and has charge of the instrument. During his absence in South America, Dr. G. R. Mansfield is temporarily in charge.

Mention was made in last year's Report of the Shaler Memorial Fund, and of the probable use of the income from that Fund in paying the expenses of an expedition to South America. During the past year the Division of Geology, entrusted with the management of the Fund, voted to send Professor J. B. Woodworth to South America. For this purpose he was granted leave of absence from June 20 to the end of the first half-year, 1908–09. During the summer he made a study of the Permo-Carboniferous conglomerates of Southern Brazil. After the rainy season sets in in Brazil, Professor Woodworth will spend the remainder of his time upon the coast of Chile, between Valdivia and Valparaiso, in an investigation of the nature of shore-line changes. Professor R. DeC. Ward and Mr. Winthrop Perrin Haynes were appointed members of the Expedition to Brazil for the term of the summer vacation.

Owing to the small attendance upon the summer courses in geology and geography offered in Cambridge during several years past, the Department this year devoted its available resources to the development of courses given away from Cambridge. Professor Davis offered an extended course of physiographic field work in Northern Italy and Southern Switzerland, as did also Professor Johnson in Central France. Professor Wolff offered a course in Southern Montana, and Dr. Mansfield gave, in Montana, a course equivalent to Geology 5 of the winter term. Under special conditions, one student, acting as assistant, was admitted to the Shaler Memorial

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Expedition to South America, with the privilege of counting completed field studies in Brazil as a half-course.

The Geological Conference was maintained during the year, papers on a wide range of subjects being presented by instructors and students.

The officers of the Department have been greatly helped in their work of preparing specimens and diagrams for their lectures and laboratory work by the effective aid given by Mr. George M. Flint, whose engagement as laboratory assistant and curator of teaching materials was noted in last year's Report.

The sub-committee on the Gardner Collection of Photographs (Messrs. Woodworth, Ward, and Johnson) submits the following tabulated report. Mr. Flint has begun a geographic distribution catalogue of the slides, work on which is in progress. Numerous photographs have been temporarily deposited in the exhibition cases of the Geological Museum. It is hoped that a special case may be placed in the hall of the exhibition floor for the exposition, during short and stated periods, of interesting and timely groups of photographs. In this manner, in the course of a few years, most of the more important views in the collection could be made accessible to the public at a slight expense for casing. A catalogue cabinet was purchased, and has been placed in the hall on the second floor of the Geological Museum for ready consultation.

| State of Collection, July 1. | Photographs. | Slides. | Negatives. |
|---|---|---|---|
| Accessions since last report . . . | 142 | 398 | 0 |
| Unidentified views . . . . . | 253 | 0 | 0 |
| Duplicates . . . . . | 144 | 0 | 0 |
| Broken . . . . . | 0 | 6 | 0 |
| Condemned . . . . . | 0 | 21 | 0 |
| Condemned (as shown by catalogues) since beginning of collection . . . . . | | 57 | |
| Last accession number . . . . . | 5954 | 5526 | 0 |
| Number now in collection . . . . | 5872 | *5469 | 1236 |
| Number card catalogued . . . . . | 0 | 3987 | 0 |

The sub-committee on the Geological Museum (Professors Woodworth, Wolff, and Jackson) reports that Mr. R. W. Sayles continued to act as Assistant in Charge of Exhibition Collections during the

* The difference between actual number and accession number is balanced by the number of slides condemned since beginning of collection.

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year. The Curator, or Assistant, in the Geological Museum is appointed by the Faculty of the Museum of Comparative Zoölogy upon the recommendation of the Department of Geology and Geography, or of its sub-committee. The sub-committee of the Department, as at present constituted, acts as a body of advisers interested in the development of the Museum. The existing funds of the Museum are administered by the Department.

An unusually instructive collection of lavas from Hawaii was given to the Museum by Mr. C. R. Simpkins. Through Professor Davis a collection of glaciated pebbles from the supposed Archaean conglomerates of Griqualand, given by Mr. A. W. Rogers, of Cape Town, was received. Mr. Sayles donated a large glacial erratic, deeply eaten by swamp waters. This is one of the so-called "anvil" rocks, and came from Providence, R. I. Mr. Sayles also gave a fragment of Stockbridge limestone, from the bed of a river at South Lee, Mass., containing a good example of a river-made pot-hole. Professor Charles H. White presented a collection of calcareous growths from the shore of the Pleistocene Lake Lahontan, near Hazen, Nevada. Professor Palache gave a modern travertine deposit made in a mine flume.

Friends and former students of the Department should understand that money to build exhibition cases, and the acquisition of desirable collections illustrating both dynamical and structural geology, and also the physiographic features of the earth's surface, are pressing needs of the Museum in order that it may be placed in the rank of longer established geological exhibits in New England.

The sub-committee on the Josiah Dwight Whitney Scholarship reports that two scholarships of $100 each were given to Mr. Sedgwick Smith and to Mr. G. B. Roorbach, students in the summer course in geology given in Montana; and that $45 was allotted to Mr. W. G. Reed, Jr., for geographic work in Central France under the direction of Professor Johnson.

The following abstracts of the reports made to the Chairman by the instructors in the Department give details as to the different courses, and set forth the condition of the laboratories.

Professor Davis reports that in September and early October, 1907, he attended the centenary celebration of the Geological Society of London, and before and after the meeting made excursions in North Wales and the English Lake District, in both of which the effects of glacial erosion were prominently displayed. Regarding these features in North Wales, he made a preliminary report at the New York meeting of the National Academy in November, and

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spent much time through the winter in preparing a detailed discussion of the various theories that had been offered to account for them.

As Professor Davis was excused from the work of lecturing through the year, his time was given chiefly to writing on three subjects. First, an account of the physical geography of the United States for the forthcoming edition of the Encyclopaedia Britannica. Second, a similar essay, but with greater attention to human conditions, on North America, exclusive of Mexico, for a work entitled "Die Kultur der Gegenwart," now in course of publication. Third, a hand-book for laboratory work in schools, entitled "Practical Exercises in Physical Geography," the preparation of which has occupied a share of time for four years past, and is now completed.

At the winter meeting of the Association of American Geographers in Chicago, and at the second annual gathering of geography teachers in and near Boston, held in the Museum, March 28, Professor Davis presented for discussion a plan for the systematic description of land forms, under the title of "The Method of Structure, Process and Stage," which has been gradually developed in the progress of his work for a number of years past. The same method was applied during a geographical excursion across Northern Italy and into Southeastern France from June 1 to July 18, when he had the advantage of discussing its application to various problems with some fifteen European and American geographers who accompanied him for longer or shorter periods. The party visited in succession the dissected coastal plain in the neighborhood of Ancona, the redeepened valley of the Lamone near Faenza, the basins of Florence and Val d'Arno, the simple shore-line near Pisa, the complicated shore-line between Spezia and Genoa, the elbow of capture of the Tanaro at Bra, the over-deepened Alpine valleys in whose terminal depressions lie the superb lakes of Como and Maggiore, the great terminal moraines of Ivrea, the valley of Aosta, various parts of the valley system of the Isère, the dissected slope of the Cévennes, and the volcanic district of Le Puy.

Following this excursion Professor Davis attended the International Geographic Congress at Geneva, and served there as President of the section on Educational Geography.

Professor Jackson reports that Geology 11 was taken by three undergraduates and two graduates; Geology 15 was taken by one undergraduate and one graduate, and Geology 20*d* was taken by one graduate. The laboratory facilities for these courses are most complete, and it is to be regretted that so few students avail themselves

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of the advantages offered. During the year Professor Jackson has been engaged in work on a monograph on Palaeozoic Echini.

Professor Ward reports that the meetings in the course in Elementary Meteorology (Geology *B*) have been changed from 3.30 P.M. to 11 A.M., the result being a considerable increase in the number of students. A new course on the Geography of South America (Geology 2) was given for the first time. This course was established at the request of the Dean of the Graduate School of Business Administration. Geology 1 has been changed from the Climatology of the United States to the Climatology of North America. The intermediate course in Meteorology has been given up, owing to the desire of the Department to develop its instruction along the lines of climatology, rather than in the direction of more detailed work in meteorology proper. The research course in climatology (Geology 20*e*) was taken by four students. Theses prepared in this course have been published as follows: "Early Meteorological Data for Saline, Mich.," by J. E. Buchanan, *Monthly Weather Review* (U. S. Department of Agriculture, Weather Bureau), Vol. XXVI, April, 1908, pp. 105–107. "Weather Influences preceding the Evacuation of Boston, Mass.," by W. N. Lacy, *ibid.*, May, 1908, pp. 128–129. "Early Meteorology at Harvard College," by B. M. Varney, *ibid.*, pp. 140–142. "Some Climatic Influences in American History," by W. N. Lacy, *ibid.*, June, 1908, pp. 169–173.

During the year the laboratory was inspected by Dr. P. Polis, Director of the Meteorological Observatory at Aachen, who had been sent to the United States by the Prussian Ministry of Agriculture to investigate the work of the United States Weather Bureau and the conditions of meteorological instruction in this country. In his report to his government, Dr. Polis laid special emphasis upon the equipment of this Department for giving instruction in meteorology and climatology.

Professor Ward spent six weeks of the summer in Brazil, as a member of the Shaler Memorial Expedition. His object was to gain information, at first hand, regarding the climate and products of Southern Brazil. He has prepared several papers on the results of his trip.

Professor Woodworth reports that he gave Courses 4, 5, 8, 16, and instruction in 20*c*, as in the previous year, in the first named course with the assistance of Professors Davis and Wolff as lecturers on special topics in general geology. Dr. Mansfield aided in

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the field work in Courses 5 and 8. Gifts of rocks and maps for teaching purposes were received from Messrs. Eggleston and Sayles, and Dr. Mansfield. A small collection of rocks illustrating the geological formations of the vicinity of New York City has been added to the laboratory equipment in Course 5. Mr. Lahee, in connection with his work in Course 20*c* on the Geology of the Kingston area in Rhode Island, made a collection of rocks from the metamorphosed coal-measures of the Carboniferous system. Mr. H. E. Merwin, J. D. Whitney Scholar for 1906, deposited the fossil pleistocene shells found by him in Vermont among the materials available for research. One graduate student worked during the year on the geographic conditions attending the extinction of *Mastodon americanus;* another carried on local field studies on the details of joint distribution in relation to directions of rock tension and compression.

Professor Woodworth continued his work for the New York Geological Survey during the year. In August and September, 1907, he was engaged in mapping the Pleistocene formations of the Rouse's Point quadrangle in New York, and a part of that area lying in Vermont. A much greater share of his time than usual was given to routine work in the Museum, especially to the installation and working of the seismograph elsewhere referred to. On June 20 he sailed from New York for Rio de Janeiro in charge of the Shaler Memorial Expedition to South America.

Mr. Eggleston spent three weeks of September, 1907, in the examination of the syenite of Cuttingsville, Vt., and again visited the area in June, 1908. Early in the summer he joined Mr. Varney in a geological and geographical study of the coast of New Brunswick. Mr. F. H. Lahee continued his studies of the southern part of the Narragansett basin in the summer of 1908.

Professor Johnson reports that the course in Economic Geography (Geology *C*), offered this year for the first time, was elected by 37 men. In the absence of Professor Davis he conducted the advanced course in Physiography (Geology 20*a*), in which three men pursued investigations in shore-line topography; drainage modifications; the place occupied by geography in the elementary schools, and the physiographic features of selected States in the Union. One report growing out of this work will be published in the near future.

During the winter Professor Johnson gave a course of fifteen lectures on Physical Geography in connection with the Teachers School of Science, under the direction of the Lowell Institute. The

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lectures were attended by about 115 teachers from Boston and neighboring cities and towns. At a meeting of the geologists of the eastern United States, held in New York City in April, Mr. W. G. Reed, Jr., a student in advanced physiography, presented a paper on the development of Nantasket Beach, and Professor Johnson a paper on the origin of beach cusps.

In June, Professor Johnson sailed for France, where he directed the researches of four students in the volcanic region of the Auvergne. The following topics were treated: the physiographic features of the great fault-line scarp west of the Limagne basin, by Mr. S. W. Cushing; drainage modifications due to lava dams, by Mr. W. G. Reed, Jr.; physiographic features due to glacial erosion, by Mr. J. E. Buchanan; and variations in the forms of volcanoes, by Mr. E. W. Schmitgen. After completing the studies in the Auvergne, Messrs. Cushing and Buchanan devoted a portion of the summer to studies of glacial erosion in Switzerland, Northern Italy, and Scotland; while Mr. Reed investigated the physiographic features of the Maloja Pass region in Switzerland. Professor Johnson spent the remainder of the summer in physiographic studies in Switzerland, Northern Italy, Western Germany, Scotland, and England. He attended the Ninth International Geographic Congress held at Geneva, July 27 to August 6.

The geographical laboratory equipment has been increased by the purchase of six new desks, a number of large wall maps and charts, ten eight-inch globes, besides a number of smaller maps, photographs, and lantern slides.

Dr. Mansfield reports that he conducted Geology 12, Mining 28, and Geology S5, and rendered assistance in Geology 5 and 8. In Course 12, during the first half-year, the students made geological surveys of assigned areas and submitted reports in prescribed form. In the second half-year the time was spent in field study of some of the broader geological problems afforded by the Boston Basin. In Mining 28 a study of a part of the Middlesex Fells district was made, on a scale of 300 ft. to 1 inch. Each student was assigned a definite portion of the area, and the results were embodied in a single large map. Course *S5* was conducted in Montana for five weeks in July and August. The party outfitted at Bozeman, Mont., and made a circuit of about 400 miles through the mountain district to the southwest and south, including the regions of Alder Gulch, Ruby River, Red Rock and Henry's Lakes, and the Upper Madison Valley. Specimens and photographs were collected, which will be

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available for the teaching collections of Course 5, and materials for brief publications were obtained. The course was taken by six students.

The titles of the publications by members of the Department for the past year having been fully recorded in the *University Gazette*, they are not reprinted here.

ROBERT DEC. WARD, *Chairman*.

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# THE DIVISION OF MINING AND METALLURGY

To the President of the University: —

Sir, — The number of students enrolled in the programme of Mining and Metallurgy in the Graduate School of Applied Science at the beginning of the academic year 1907–08 was twelve, an increase of nine over the enrolment at the corresponding time in the preceding year. In the Lawrence Scientific School the number of students in our programme dropped to six, in accordance with the general dwindling of that School. Since no new students are hereafter to be admitted to the Lawrence Scientific School our programme will disappear probably within the next two years. The table below shows these figures in comparison with those of preceding years.

| | '98–99 | '99–00 | '00–01 | '01–02 | '02–03 | '03–04 | '04–05 | '05–06 | '06–07 | '07–08 |
|---|---|---|---|---|---|---|---|---|---|---|
| Students in Mining and Metallurgy. | 19 | 30 | 42 | 67 | 75 | 68 | 67 | 68 | 20 | 6 |
| Students in the L. S. S. . . . . | 415 | 495 | 507 | 549 | 584 | 548 | 530 | 504 | 204 | 96 |
| Per cent. . . . . | 4.6 | 6.1 | 8.3 | 12.2 | 12.8 | 12.6 | 12.6 | 13.4 | 9.8 | 6.3 |

Three men received the degree of Mining Engineer in 1907–08, one in March and two at Commencement.

## Courses of Instruction

No new courses of instruction were added to our list during the year. Course 16, an elementary course, introductory to the broad fields of mining and metallurgy, was given for the first time by Professor Peters, and attracted a large number of students, who found it both interesting and valuable. We confidently expect that it will prove of equal benefit to the Division in the future.

With the great increase in the number of our courses, partly in unforeseen directions, and with the development of our graduate instruction, the numbering which had gradually grown up had become inconvenient, non-consecutive, and quite unsystematic. Unrelated courses were grouped together, while others which belonged together were widely separated in the official Announcement. It



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was therefore felt, in spite of temporary inconvenience to students, instructors, and the College office, that it would be better to rearrange the whole system, and this was accordingly done. The present arrangement is not only a logical and systematic one, but it also provides blanks at the proper places for all the new courses which are ever likely to be offered in the lower groups.

Owing to Professor Sauveur's absence during the year 1908–09, arrangements were made to have his courses in General Metallurgy and the Metallurgy of Iron and Steel given by Mr. H. M. Boylston. His other courses in Metallography, in Blast Furnaces, and the Course of Research were bracketed for the coming year.

### Lectures, Gifts, etc.

As in the preceding year, we again had the advantage of a series of twelve lectures by Mr. Robert Van Arsdale Norris, of Wilkes-Barre, Pa., on the subject of Coal Mining. Mr. Norris's wide experience and eminence in this department of Mining Engineering and his success as a lecturer make this course a valuable one, and it is to be hoped that his connection with us may be maintained in the future. These lectures were provided for by the unexpended balance of the gift made by the Visiting Committee in 1906.

Last year the Division received a particularly welcome gift of $3,000 for the improvement of our summer work and the establishment of a summer course in practical mining. This money was given by fourteen gentlemen, and was collected through the efforts of Mr. Quincy A. Shaw, Jr., a member of the Visiting Committee. This sum was sufficient to equip and provide for the running expenses of the course in the summer of 1908, and will be sufficient to carry on the work in the summer of 1909.

The professional activities of the members of the Division, in addition to their work as teachers, continued as in previous years. Dr. Mansfield during the summer had charge of a field course in Geology in Montana for the Division of Geology. On his return he visited some of the copper mines of Butte. Mr. Boylston was actively engaged in collaborating with Professor Sauveur in the preparation of a book entitled *Laboratory Experiments in Metallurgy*, which is intended to cover the work done by our students in the courses in General Metallurgy and in the Metallurgy of Iron and Steel. Professor White, who had charge of the summer course in Mining up to August 1, spent August and September in travelling in Europe. Professor Sauveur continued to serve as Secretary of the Committee appointed several years ago by the International Asso-

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ciation for Testing Materials on *The Uniform Nomenclature of Iron and Steel.* The report of this Committee, which was presented at the Brussels Congress in 1906, was republished in the *Bi-monthly Bulletin of the American Institute of Mining Engineers* for March, 1908. Professor Sauveur also appeared as Metallurgical Expert in several lawsuits. Dr. Peters was much consul tedin matters relating to his special field. Professor Smyth made a number of mine examinations, and as usual spent the summer in the Lake Superior region in active professional work.

During the year places were found for five men, and in addition three men were appointed to assistantships on the recommendation of the Division.

### Summer Work

Through the courtesy of the Vermont Copper Company the opportunity arose during the year of establishing a camp at their mine in Orange County, Vermont, for the more practical instruction of our students in Mining 12 along the general lines of the Crocker School of 1904. Money to carry on this work during the summers of 1908 and 1909 was secured, as has already been stated, and the course opened on June 24th in charge of Professor C. H. White, assisted by Mr. Weeks.

The mine which we were permitted to have the use of is the South Mine of the Vermont Copper Company, the underground workings of which consist of drifts and stopes on two levels, 110 feet apart. The workings on the upper level extend for a distance of 560 feet along the vein, and on the lower, a distance of about 100 feet. These levels are opened from two adits, the upper of which is 315 feet long, and the lower, 770 feet long. A winze, which will ultimately connect the two levels, had been sunk fifty feet. The mine therefore, when properly equipped, offered an excellent opportunity for carrying on the ordinary operations of practical mining, such as drifting, raising, stoping, sinking, timbering, track-laying, pumping, etc. The necessary equipment, which we supplied, consisted of a pipe line for compressed air, about 600 feet long, extending from the northern portion of the mine, which was in active operation; a pump for unwatering the winze; a windlass and fixtures; hand and machine drills; light rails for track; wheelbarrows; hand-tools for rock work; and wood-working tools for timbering.

A pleasant camp ground was selected near a spring, about seven minutes' walk from the mine. Samples of the water were taken for analysis and sent to Dr. Charles Harrington of the Medical School,

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who reported that the water could be used with entire safety for all purposes. The camp outfit consisted of nine tents with floors, six of which served as sleeping quarters. A large tent was used for both a dining-room and draughting-room.

The fifteen students who enrolled in the course were divided into four squads, each squad devoting one-fourth of its time to each of the four general divisions of the work. These divisions were (1) surveying, (2) shaft-sinking, (3) drifting, including raising, etc., and (4) track-laying and timbering, with hand-drilling in cutting hitches, and inspecting and sketching the equipment of the modern mining plant operated by the Company, and of their smelter which was nearing completion.

In the division of surveying, which was in charge of Mr. W. S. Weeks, each student was required to make a map with sections of the entire South Mine from surveys made by his squad, each man filling in turn the various positions in the corps. The other three divisions were in charge of practical miners. The work accomplished was as follows: the south end of the drift on the upper level was advanced fifteen feet. The winze was sunk six feet to a total depth of fifty-six feet. A raise was begun near the junction of the upper adit with the vein, but only a few tons of rock were broken as the power was not sufficient to operate more than two drills. Each squad framed and put in place two drift sets, most of which were in running ground. The track work was confined for the most part to repairs on the track in the upper level, which had to be kept up for daily use. The students were required to take notes on the work done each day, making sketches when possible. The books were left with the instructor at the end of the day, so that errors or omissions in observation were pointed out immediately and corrected by the student on the following day.

Professor White makes the following comparison with the Crocker School of 1904 in which he had charge of the Harvard men: —

"In comparison with the Crocker School of four years ago in Colorado, I regard the results accomplished by our School in Vermont as even more satisfactory. In Vermont we had not the practice in milling and ore-dressing that we had at Idaho Springs, nor were our miners in Vermont so skilful, perhaps, as some of those in Colorado, yet on the other hand we had the opportunity to study methods of surface and underground handling of larger quantities of ore and its treatment by pyritic smelting. Our camp life in Vermont was more wholesome and far superior in every way to the boarding arrangements in Colorado. The attitude of our students this summer

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towards their work was decidedly more enthusiastic and therefore more professional."

The pleasantest relations prevailed between the officers and students of our School and the officials and employees of the Company. The Company furnished us power, mine timber, dynamite, and other materials; allowed us the use of their teams and supplied us with labor, gave us the use of various tools and other equipment, and the services of their blacksmiths for all our work. The heads of the several departments also aided mater all in the instruction of the students by explaining in detail the special methods and processes practised in the various departments. For these courtesies we are deeply in their debt.

### Needs of the Division

The needs of the Division have been repeatedly set forth in previous reports. The most pressing are enlargement of the Rotch Building, additional instruction in Mining Geology, Mining Machinery, and Electro-metallurgy, and a summer course in Metallurgy.

### Publications

The titles of publications by members of the Division during the last academic year having been fully recorded in the *University Gazette*, they are not reprinted here.

H. L. SMYTH, *Chairman.*

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# MINERALOGICAL MUSEUM AND LABORATORIES OF MINERALOGY AND PETROGRAPHY

To the President of the University: —

Sir, — The plant for teaching and investigation has been maintained at the same high standard by additions of new specimens and apparatus. The work of the permanent laboratory assistant, Mr. Flint, is already evident in the new labelling and other details desirable for the best use of such material. A start has also been made in replacing the old and often faded labels of the public collections by neatly type-written labels, which add much to their appearance and utility. As there are many thousands of these labels and the paper itself turns yellow in sometimes less than ten years by exposure to the light, it looks like a never-ending task unless some suitable substance can be found which remains unchanged by time.

The mineral collections have received some interesting accessions. Miss Mary D. Peck has presented the collection formed by her grandfather, Professor William Dandridge Peck, A.B. 1782, and added to by her father, Dr. William D. Peck, Class of 1833. The first named was Massachusetts Professor of Natural History from 1805 to 1822. This gift naturally draws attention to the early history of the collection; it is stated in Quincy's History of Harvard University that the present mineral collection was founded in 1793 (the oldest collection except books and some philosophical apparatus belonging to the institution), and that Dr. Benjamin Waterhouse was appointed keeper at that time. By the kindness of Dr. Walter Faxon the Museum has acquired a letter from Dr. Waterhouse written in 1831 to Abraham Bishop, Esq., of New Haven, in which the following paragraph occurs: "I have, in like manner, commenced several useful things besides vaccination. I began the business of *Mineralogy* in 1784, and from about ½ peck of minerals formed the cabinet in the University of Cambridge, which led to the one you have now at New Haven, and every other in the U. States."

Professor Raphael Pumpelly has also given his valuable collection of minerals to the Museum, Mr. A. F. Holden has continued his gifts of specimens from some of the Western mines, and other donors have given individual specimens.



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The collection of gem minerals in the gallery of the exhibition room, the foundation of which was the Hamlin collection of tourmalines and other unique and valuable specimens given by Mr. James A. Garland twenty-five years ago, has been enlarged by specimens of generally the same high grade, so that a creditable display of this popular side of Mineralogy is assured. Four other gallery cases have been filled with a collection of minerals and the substances derived from them for use in the arts, which has been formed by Professor Palache with the kind help of several manufacturers, and illustrates some phases of economic mineralogy, coinciding with the establishment of a new course of instruction in that subject. Slabs of some half dozen meteorites have been added to that collection.

The Curator spent the summer in a geological tour in parts of Vermont, Montana, Wyoming, and British Columbia. Mr. J. W. Eggleston has completed the field-work on the granite area of Cuttingsville, Vt.

The titles of the papers published by members of the Department during the year having been fully recorded in the *University Gazette*, they are not reprinted here.

JOHN E. WOLFF, *Curator.*

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# THE PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY

To the President of the University: —

Sir, — When we recall the beginnings of this Museum in a few cases in Professor Jeffries Wyman's laboratory in Boylston Hall, in 1866, and the fact that in 1874 the collections were all contained in cases on the small upper gallery of that building, and then note what the Museum is to-day, we cannot but be impressed by its present advancement and its usefulness to the University.

This great advancement has been made possible largely by the interest that the Museum itself has helped to awaken and foster, and the consequent assistance of many friends, as shown by gifts of single specimens and of large collections, and by the gifts of money for current expenses, for explorations, for publication, for the purchase of special collections, for the salaries of Assistants in the Museum, for salaries of Instructors in the Division of Anthropology, for building cases, and even for repairs on the present Museum building. There has been received and expended for these purposes since 1881, when the first gift in money, $75 for the exploration of a mound, was received, considerably more than the original gift of $150,000, by the founder of the Museum. Besides this there have been several special foundations by gift and bequest amounting to $80,000.

The value of the Museum, however, cannot be expressed in terms of money, since it contains hundreds of specimens, many collected a century and more ago, from our Indian tribes and other native peoples, — received principally from the American Antiquarian Society, the Boston Society of Natural History, the Boston Athenaeum, the Boston Marine Society, the Massachusetts Historical Society, and the Boston Museum, — which could not now be secured at any price.

The Museum has, through these gifts and the many explorations it has conducted, become of the first importance in the study of many subjects pertaining to Anthropology, while its collections and auxil-



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iary library furnish the means for instruction in Anthropology given in the University.

The exhibition of collections, as an exhibition of public interest, important as it is in this respect, has been made secondary to their value for comparative study of the different culture areas and for illustrating man's development on various portions of the earth from the earliest known times to the dawn of civilization.

Students in the several courses in Anthropology must be able to see the specimens required for study and for comparison. To this end properly arranged collections must be made in glass cases, where the specimens are safe from dust and insects. The advanced student engaged in a special research must not only have access to the exhibited material, but also to the vast amount that is in storage cases and in stacks, that he may have every possible facility the Museum can afford him. It is therefore necessary that all specimens not on exhibition should be arranged so as to be readily accessible. This part of the Museum is as important as the exhibition halls, but to arrange it in this manner to the fullest extent requires more room than is at present available. Gifts amounting to $4,500 would however provide the means of placing every new case possible in the present exhibition halls, and for additional stacks in the basement rooms for the reserve collections.

If the heating apparatus could be removed from the basement — as it should be at the earliest day practicable, primarily on account of injury from dust and soot — a large room would be available for stacks, which would be a great relief in our present crowded condition.

The completion of the South Wing, at a cost of $150,000 as urged in the last report, is the only means of giving to the Museum all the additional room which it needs. That we have reason to believe our hopes may in time be fulfilled is evidenced by the vote of the Corporation extending the time for reserving the unoccupied space of one hundred feet for the extension of the Museum, and by the gifts received, since last reported, for the various purposes of the Museum, and for the Division of Anthropology in the University.

When it is recalled that the income of Mr. Peabody's foundation provides only about $4,000 for the general purposes of the Museum, and about $2,500 for the salary of the Peabody Professor and Curator of the Museum, the importance of the gifts here mentioned will be realized.

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|---|---|---|
| From the Committee on the Central American Subscription Fund, who spend the money received from the subscribers: — | | |
| For explorations in Central America, | $19,199.99 | |
| " publications on Central American researches, | 4,459.56 | |
| " collections, | 321.20 | |
| " binding books in the Library, | 200.00 | |
| " incidentals, | 27.70 | |
| " salaries of instructors and assistants, | 3,188.33 | $27,396.78 |
| From a friend, for the salary of an instructor, 1908–09, | | 1,200.00 |
| From a friend, for a Central American Fellowship, 1907–08 and 1908–09, | | 1,200.00 |
| From the Trustees of the Mary Hemenway estate, for exploration in New Mexico, | | 500.00 |
| From the Trustees of the Mary Hemenway estate, for repairing and painting walls and for a new case in Hemenway Hall, | | 422.00 |
| From Mr. Augustus Hemenway, for a new case in N. A. Indian Hall, | | 255.50 |
| From Mr. Louis J. de Milhau, $5,000 a year for three years from July 1, 1906, for the South American Expedition, received to date, | | 10,866.48 |
| From John W. Hastings, who was the anonymous giver of $50 a month towards the salary of a member of the South American Expedition, received to the time of Mr. Hastings' death, | | 700.00 |
| From Mr. Clarence B. Moore, annual gift for explorations, | | 500.00 |
| " anonymous friend, annual gift for explorations, | | 100.00 |
| " Stansbury Hager, towards a special exploration, | | 15.00 |
| " Mrs. N. E. Baylies, annual gift, | | 25.00 |
| " the Curator, annual gift toward salaries, | | 900.00 |
| " anonymous, for temporary assistant, | | 15.00 |
| " " towards making a habitation group, | | 50.00 |
| " " for repairing and painting walls, | | 200.00 |
| " " for reference books in Course 1, | | 25.00 |
| " " for pamphlet cases in Library, | | 2.00 |
| " Mr. Elliot C. Lee, for book-stack in Library, | | 250.00 |
| " Mr. John B. Stetson, Jr., annual gift of $100 for five years for books for the Library, received to date, | | 150.00 |
| | | $44,772.76 |

Among the most pressing needs of the Museum, in order that its work may not be liable to interruption and may be carried on to definite ends, are permanent endowments for the salary of the Secretary and for the employment of additional assistants in the Museum.

As noted in my last report, the expedition to South America under the patronage of an anonymous Harvard graduate of the Class of 1906, who has since given permission to have his name made known, — Mr. Louis J. de Milhau, — had made its first trip of six months to certain tribes on the eastern slope of the Andes, and had returned,

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via Cusco, to Arequipa. At that time Mr. Hastings returned to this country. Mr. de Milhau remained for a while in Peru and then returned by steamer through the Straits of Magellan. Mr. de Milhau reports that the letters from President Roosevelt, Secretary Root, and Cardinal Gibbons were the means of opening most desirable relations with the President and government officials of Peru, with the clergy, with the officials of the railroads and of the Inca Mining Company, and with numerous private individuals of prominence. Everywhere the members of the expedition were well received and aided in their work. The government gave free entry of goods, and the railroads gave free transportation, as did the Inca Company over its extensive land and water routes.

The latest reports from Dr. Farabee and Dr. Horr, the present members of the expedition in the field, show a continuation of all possible courtesies and assistance. Dr. Farabee and Dr. Horr have since made another successful trip to other portions of the eastern slope and returned in safety to Arequipa. The last information from the Expedition was on September 12. Since July 21, they had been with the government party of engineers and an armed escort going through a largely unknown country looking for a location for a railroad from Cerro de Pasco to the Ucagali river. From this point they expected to return to Arequipa sometime in January next. This region will probably prove one of great interest as nothing is known of the tribes inhabiting it. Drs. Farabee and Horr travel entirely at the expense of the Peruvian government while on this expedition, — Dr. Farabee being intrusted with the determination of elevations, latitude and longitude, duties which his former training enables him to undertake. A selection from all ethnological collections made is assured to the Expedition, as well as the opportunity to study the customs and language of the tribes encountered. Two boxes of specimens shipped from Iquitos as the first results of this trip are on their way to the Museum. Other material from previous trips is in charge of Grace & Co., for future shipment. It is expected that the Expedition will close its field work in the coming spring.

It is my painful duty to record the death on April 26 of Mr. John Walter Hastings, Harvard 1905, who took a great interest in the South American Expedition and accompanied it as one of the ethnologists in the first year. It was Mr. Hastings who was the anonymous contributor towards the salary of a member of the Expedition. He and Mr. de Milhau also paid their own travelling expenses. After his return to this country Mr. Hastings established himself in New York, where he was engaged in literary work, including the

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preparation of magazine articles on his South American trip, several of which were accepted for publication and will soon appear. It was his intention to elaborate these articles to be published in book form. By the death of Mr. Hastings the Museum has lost a devoted friend. He was a man of lovable character, generous and warm-hearted, always ready to aid others and to do his part to advance such scientific matters as came in his way to foster. While on the Peabody Museum Expedition to Iceland in 1905, he not only made anthropological observations and collections for the Peabody Museum, but he also, in connection with Mr. de Milhau, who was a member of the Expedition, arranged for a complete series of the birds of Iceland to be sent as their joint gift to the Zoölogical Museum of the University.

The Central American explorations, under the direction of the special Committee of the Museum, have been continued. In April, 1908, the important reports of Mr. Teobert Maler, covering his explorations in former years of several prehistoric cities in Guatemala, were published by the Museum in No. 1, of Vol. IV of its Memoirs. The second number of this volume, which is in press, will be a continuation of Mr. Maler's researches in Guatemala and British Honduras. The two numbers contain forty-four heliotype plates, maps, and text illustrations. These reports by Mr. Maler have made known many new sites of ancient cities in Central America, while his beautiful photographs of the buildings and sculptures, with many hieroglyphic inscriptions, have furnished new material for study.

From Mr. Edward H. Thompson, who has been for many years associated with the work of the Museum in Central America, we have received a series of moulds of the sculptured walls of the temple at the end of the so-called Tennis Court at Chichen Itza. As important as are these and other moulds now in the Museum, we are unable to take casts from them for the present, owing to the crowded condition of the Central America hall.

Mr. R. E. Merwin, the Hemenway Fellow, has been in the field since April, continuing, until October, the exploration of the ancient burial site on the Ferris Tract in Ohio owned by the Museum. He then removed his camp to the Turner Group, where he is now at work finishing the exploration of this ancient site of earthworks and mounds where Dr. Metz and the Curator began explorations, over twenty-five years ago, which have been continued under their direction from time to time as circumstances permitted. A large portion of this remarkable site, which has been so often referred to in these reports, is fast being destroyed by the taking away of the gravel upon which it is

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situated, and it is owing to this fact that Mr. Merwin was instructed to make as thorough an exploration as possible of portions of the site which were covered by buildings or were otherwise inaccessible until the present season.

The researches in the Delaware Valley have been continued by Mr. Ernest Volk, who has carefully examined many excavations made in the gravel deposits and has worked with his trowel over a considerable space of the exposed sections. Several unquestionable implements of chipped stone have been found *in situ* in the gravel and further evidence has been obtained to prove that implements are found which are of the same age as the gravel deposit. It is only by such long-continued and painstaking work as Mr. Volk is engaged in that the much discussed subject of the presence of palaeolithic implements in the Trenton gravels is being settled; and for his persistence and conscientious labors to ascertain the exact facts and truth, American archaeologists cannot be too grateful. The Museum has a full report from Mr. Volk, covering over twenty years of exploration in the Delaware Valley since he began his work under the direction of the Curator. The report is accompanied by a large number of photographs of the gravel sections, sand pits, and also of stone implements, and a human bone, and fragments of antlers, shown *in situ*, with diagrams and drawings. This full and important report should be published by the Museum, and it is regrettable that there are no funds available for the purpose at present.

During the summer of 1908, Mr. H. J. Spinden, Austin Teaching Fellow in Anthropology, carried on archaeological and ethnological researches among the Nez Percé and other Sahaptian tribes under the auspices of the American Museum of Natural History. This work was a continuation of his researches in 1907 for the Peabody Museum.

During the summer vacation the Museum was able to take part in the explorations carried on by the Archaeological Institute of America under the direction of Dr. Edgar L. Hewett at Rito de los Frijoles, New Mexico. Here the party explored the ruined pueblo and mapped and partially explored a long series of cliff houses in front of which were ruins of houses from one to four stories high. In the party were the following Harvard men: Dr. A. M. Tozzer and Messrs. S. G. Morley, A. V. Kidder, H. G. de Fritsch, L. C. Parsons, W. McLaughlin, and P. Stanwood. Dr. R. B. Dixon joined the party for the last three weeks of its stay in the field. Before joining this party Messrs. Kidder, de Fritsch, and Parsons were with the

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Institute party exploring pueblos and cliff houses in Utah, and Messrs. Morley, Stanwood, and McLaughlin were with another Institute party in Colorado. During the spring Messrs. Morley and Kidder were with the Government party under the direction of Dr. J. Walter Fewkes assisting in his work on the cliff houses of the Mesa Verda.

Such experience in the field is necessary for all who are preparing for professional archaeological work and it is required of Harvard students who are studying for a doctor's degree in American archaeology and ethnology in the Division of Anthropology. Mr. Morley was the Central American Fellow for 1907–08, and this field work was preparatory to his work in Central America where he is to go this coming winter as a fellow of the Archaeological Institute. Mr. Kidder is making a special study of the culture areas of the Southwest. He is about leaving to spend the winter in Egypt, and on his return he will resume his American studies preparatory to entering for a doctor's degree.

Dr. Charles Peabody, who has been appointed Assistant in European Archaeology in the Museum, has begun the preparation of special explanatory and descriptive labels of the European Collections in the Museum, in order to make these collections of greater importance to students. The latter part of the summer he spent in Europe, visiting several Museums and a number of archaeological sites. He has presented to the Museum an interesting series of specimens which he obtained at various sites in Italy, Austria, Hungary, France, Belgium, England, and Ireland. During his trip abroad, Dr. Peabody represented the Museum at the Congrès Préhistorique de France in Chambéry, and at the Sixteenth International Congress of Americanists in Vienna.

The additions to the Museum have been many during the year, for which we are largely indebted to generous donors. The most extensive of these is the remarkably complete collection from the Karok Indians of the Upper Klamath river in California, received from our constant friend, Mr. Lewis H. Farlow. This includes a large and comprehensive series of household utensils, basketry, stone dishes, pestles, hammers, adze handles, and other objects of daily use; dresses, personal ornaments, ceremonial objects, and weapons; also similar collections from the Tolowa, Yurok, and Hupa of the same culture area. Through his collectors Mr. Farlow was able to secure many valuable heirlooms preserved by the older Indians. He has also given many ethnological specimens from the Eskimo, Haida, Tlingit, Nootka, Quiliute, Pomo, Maidu, California Utes, Crow,

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and Cheyenne, and a large series of ceremonial baskets from the Navajo.

Mrs. Lewis H. Farlow has added to her husband's gift her collection of bead and porcupine quill work from the Crow, Cheyenne, and Sioux, including a ceremonial war shirt, beaded coats, tobacco and pack bags, moccasins and personal ornaments, horse trappings, and other objects; also several Nez Percé wallets woven of Indian hemp.

From Dr. John C. Phillips there has been received a large collection from the ruined pueblos near Ramas, Chihuahua, consisting of a remarkable series of pottery vessels, a fine metate and hand stone, two singular stone effigies, various implements of stone, and a number of stone and shell ornaments, also a few human crania from the same ruins. This collection is of particular importance as it gives the means of studying objects from a distinct culture area of the ancient Pueblo group, not heretofore represented in the Museum. This collection has been arranged with the other pueblo collections in Hemenway Hall.

Dr. Alexander Agassiz remembered the Museum while in Africa, and has brought to it the complete belongings of a native house in the Mombassa District of British East Africa, including the household utensils, drums and other musical instruments, and personal ornaments. He has also given an ethnological collection illustrating the customs of the Bantu negroes of British and German Uganda. Also articles from the Masai and Nandi tribes of the Eastern Province of Uganda and from the more northern Somali tribes. This collection includes a model of a canoe, ceremonial and war drums, spears and shields, bows and arrows, missile clubs, gourd vessels, basketry, pottery and other household articles, bark cloth and wooden clubs for preparing the cloth, articles of dress of men and women, necklaces and other personal ornaments, and various musical instruments.

Dr. Hamilton Rice, during his expedition to the Waupes river on the frontiers of Colombia and Brazil, collected ceremonial costumes, ceremonial staves, musical instruments, weapons, household utensils, articles of dress and personal ornament from the Tarino, Guinano, Cubbeo and Tucano tribes, all of which he has given to the Museum, making an important addition to our South American collections.

From Dr. William McM. Woodworth we have received stone implements from Maine and California; adze blades and pan-pipes from British New Guinea; a hafted stone adze from Fiji; a shell head-band from Marshall Islands; a hafted stone axe and missile

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clubs from North Queensland; a fish-hook and sinker from Alaska; two chief's rattles, inlaid horn ear-ornaments, and a set of gambling sticks from the Tlingit.

From Dr. George P. Howe, a summer costume, summer and winter boots, a pipe, a head-dress used in dances, a skin dresser and fish-hooks collected by him while on the Anglo-American Polar Expedition of 1906–07.

From Dr. L. C. Jones, a very old ancestral image from German New Guinea, with jars, bowls and wooden pillows from the Zulu of South Africa, archaeological objects from Egypt, and an Ojibwa pouch of quillwork.

From Captain William Irvin Moore, sixteen photographs of people and houses of Samoa and Tonga Islands.

From Hon. E. H. Thompson, two *jabucos*, or netted carrying bags, of the Mayas of a former generation. These were given to Mr. Thompson by the son of the famous chief, Creocucio Poot of Charo Santa Cruz, the old Maya stronghold; photographs of pottery from the great mound of the Mayapan group and of the painted walls of the ruined building at Acanceh; a terra-cotta pipe from Mexico.

From Mrs. W. M. James, fourteen photographs of the walls of the ancient ruin at Acanceh, colored like the original sculptures.

From Mr. Charles P. Bowditch, nine negatives and prints of certain pages of the "Books of Chilan Balam" from the Brinton Library.

From Miss Grace Nicholson, sixty photographs taken by her during her trip to the Karok, Yurok, Tolowa and Hupa of the Klamath region, northern California. These supplement the collection given by Mr. Farlow from the same region.

From Professor T. A. Jaggar, a metate, three stone celts and two pottery vessels from ancient graves in Costa Rica.

From Mr. R. F. Gilder, a collection of chipped stone nodules from the prehistoric quarries, known as "the Spanish Diggings," near Manville, Wyoming.

From Mr. Thomas Barbour, a pocket-hat of the Bontoc Igorot, Island of Luzon.

From Dr. Carl E. Shildron, forty-four terra-cotta heads and three spindle-whorls from Teotihuacan, Mexico.

From Mr. John B. Stetson, Jr., a series of decorated skins taken from blankets made by the Matico Indians of the Grand Chaco region, Patagonia. This is a series selected from a large number showing the several kinds of painted decorations used by the Maticos.

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From Mr. S. S. Ford, sixty arrowheads and chipped knives and a Catlinite pipe from Montana.

From Mr. J. K. Hollins, potsherds and eleven chipped points from Broad River, South Carolina.

From Mr. Sumner Clement, a cap-stone from a Javanese temple.

From Mr. Charles L. Seeger, a terra-cotta vase, paint cup, and flint knife from Mexico.

From Mrs. Thomas B. Bishop, Pomo woman's head-dress and a head-dress from the Pueblo Indians.

From Mr. George F. Will and Mr. Tye, photographs and two fine petroglyphs from the Cave Hills of northern South Dakota.

From Mr. George F. Will, two stone axe blades from a Mandan site, North Dakota.

From Mr. Owen Bryant, chipped implements from Oil Island, Notre Dame Bay, Newfoundland; three photographs showing ancient camping place and burial ground of the Beothuks of Newfoundland.

From Dr. John Bryant, two crania, stone lamps, cooking pots, women's knives, snow knife, adze handle, harpoon fore-shaft, throwing stick, chipped implements from Eskimo graves, northern Labrador; also a necklace, pendants, and modern carvings from the Eskimo of Baffin Land.

From Mrs. Eliza Jane Rezean Young, a model of an outrigger canoe, a bamboo bow, wooden box, and food vessels, two carved images of Buddha, several small figures representing native types, all from India.

From Dr. A. P. Bolles, an Eskimo dog whip from east coast of Labrador.

From Mr. T. G. Proctor, a stone hammer, a stone pestle and a stone pendant from near Proctor, British Columbia.

From Dr. A. M. Tozzer, a pottery drum from the Navajo, New Mexico.

From the Curator, an old Tlingit basket from Alaska.

The income of the Henry C. Warren Exploration Fund was used in connection with the gifts of Mr. Moore and of an anonymous friend in carrying on the exploration of the ancient cemetery on the Ferris estate in Ohio, belonging to the Museum, and in the investigations in the Delaware Valley.

The income of the Huntington Frothingham Wolcott Fund, has, as heretofore, proved of great benefit to the Museum in furnishing the means by which many important collections and single specimens, often of considerable intrinsic value, have been secured, which would otherwise have been lost to the Museum.

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These many additions have been, as far as was possible, catalogued and put into exhibition cases by the Assistant Curator. In order to accomplish this it has been necessary to rearrange many cases and change collections from room to room as made possible by the addition of a few new cases. Mr. Willoughby has also superintended the making of two new habitation groups which have been added to the North American Indian Hall, as well as two new lay figures. These groups and figures are made with the utmost care to have them true representations of the life and customs and costumes of our different Indian tribes. They are of exceptional interest to general visitors, and they help the student to understand the native customs which are rapidly disappearing.

Under the charge of Dr. Dixon, the Library has been put in as perfect order as the crowded shelves will permit. The new stack given by Mr. Lee has greatly facilitated this work. A shelf list of all the books has been made by Mr. Carroll. Dr. Dixon in his report of this Department Library to the Librarian of the University states that ten new exchanges have been received and that under date of July 31, 1908, the library contained 3,717 volumes and 3,188 pamphlets. The library is an important one for the officers of the Museum and of the Division of Instruction, and contains the necessary books of reference for the students. 62 volumes and 761 pamphlets were added during the year. There have also been received and transferred to Gore Hall or to Department Libraries 26 volumes and 32 serials. The gifts which have been made for the purchase of books have added several much needed volumes, especially in filling gaps in the now very complete collection of serials, while the gift for binding the serials has secured them from damage by use. The most important single gift to the library during the year is from Dr. John C. Phillips, who has subscribed in behalf of the Museum for the costly work on the North American Indians by E. S. Curtis.

Instruction in the Division has been given as heretofore in the class-room in the Museum and in the lecture-room in the Semitic Museum, by Assistant Professor Dixon and Dr. Tozzer, assisted by Mr. Spinden, Austin Teaching Fellow, and Mr. Fuller, Assistant in Anthropology. During Dr. Farabee's absence in South America, Dr. Tozzer is conducting Course 1, and during the Summer School he gave a course in Anthropology as in the preceding summer. The Peabody Professor has given instruction to students in the Graduate School.

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The two Hemenway Fellowships were held by Mr. R. E. Merwin and Mr. Irwin Hayden. The Winthrop Scholarship was held by Mr. R. G. Fuller.

For the year 1908–09, Mr. Fuller has been appointed Assistant in Anthropology. Mr. Merwin has been reappointed to the Hemenway Fellowship, and Mr. H. Otley Beyer is to be the Winthrop Scholar.

In March last the Curator was given leave of absence for the remainder of the college year in order to attend to his duties in the University of California. As a delegate of that University, he attended the Indian Conference held at Riverside in the southern part of the state, and made an address on the importance of approaching the Indian question from the standpoint of the anthropologist. During the season he carried on an exploration of an ancient burial place in Santa Barbara county for the Department of Anthropology of the University of California. While in California he arranged for an exchange of specimens by which the Peabody Museum and the Anthropological Museum of the University of California are mutually benefitted. He returned to Cambridge and resumed his duties in the Museum on the first of August.

In closing this report, regrets beyond expression are felt that it is the last to be addressed to the President who for forty years of wise administration has watched and fostered the development of this Museum.

F. W. PUTNAM,
*Peabody Professor and Curator of the Museum.*

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# THE SEMITIC MUSEUM

To the President of the University: —

Sir, — The additions to the Museum during the year 1907–08 have been two bronze battle-axes from Damascus, four stone seals, two of which appear to be Babylonian, one Assyrian, and one Persian, two Arabic manuscripts, and about two dozen specimens of rock salt from the shores of the Dead Sea.

Of the Greek papyri received from the Egypt Exploration Fund and reported a year ago three have been deposited as a loan in the museum of the Classical Department of the University. Dr. John Orne has continued his work of cataloguing the Arabic manuscripts belonging to the Museum. Professor George F. Moore again served as Acting Curator during the Curator's absence from Cambridge, May to September, 1908.

The chief interest of the past year has been the beginning of the excavations at Samaria. The report for 1906–07 described the state of the matter a year ago. The permit to dig had been granted by the Turkish authorities, and it was expected that Professor George A. Reisner, by getting leave of absence from his engagements in Egypt, would be able to devote April and May, 1908, to inaugurating the work at Samaria. Shortly after this report was written it appeared that Baurath Dr. Gottlieb Schumacher of Haifa could be engaged to carry on the excavations after Professor Reisner's return to Egypt. Doctors Reisner and Schumacher accordingly went to Samaria in April, laid out plans for the first year's work, and carried on digging at two sites on the hill for about a week (April 24 to May 1), when some unfortunate local difficulties brought the work to a temporary close. Shortly afterwards Professor Reisner returned to Egypt. Through the generous provision of Mr. Isidor Straus I was enabled to join the expedition in May. With me went Mr. Clarence S. Fisher, of Philadelphia, in the capacity of architect and draftsman.

A second period of digging extended from May 22 to June 8. The local difficulties again becoming acute, it was deemed advisable to close the works, and seek relief through the authorities at Beirut and Constantinople. This effort was successful, and accordingly the third period of digging (July 11 to August 21) passed without



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further annoyance. At the end of August the money available for the first year was exhausted, and the work was accordingly brought to a close. The total amount of time devoted to excavation was thus nine weeks.

We hope that work will begin again in April, 1909, and it is expected that Professor Reisner, who has announced his purpose to resign his position in Egypt, will be in charge. Mr. Schiff has paid into the treasury of the University $40,000, the rest of his gift for exploring Samaria, and has consented to such modification of the distribution of the expenditure as will make it possible to use a larger amount than $10,000 in a single year.

Our main excavation was carried on at the summit of the hill of Samaria. Here beneath débris varying in depth from ten to twenty-five feet we uncovered many walls of buildings of different ages, but chiefly of the Greek and the Roman period. A great stairway eighty feet broad with sixteen steps ascending from the north conducts to a paved platform, which seems to have belonged to a temple. We suppose that the body of the temple lay further south in the area which still awaits excavation. Adjoining the stairway on the west is a vaulted chamber, 40 feet by 20 feet, partly cut in the rock and partly enclosed by massive walls of masonry. By a large doorway it seems to open into one or more other chambers on the west in the space not yet excavated. At the foot of the stairway is a large Roman altar of stone, and near it was found the torso of a figure of heroic size. The fine quality of the marble, the excellence of the carving, and the dress and pose of the figure make it likely that this is the statue of a Roman emperor. Beside the altar was a stele with a fragmentary Latin inscription, and near the altar but on the stairway was a second stele with a Latin inscription in a perfect state of preservation. Both inscriptions belong apparently to about the middle of the second century A.D. Many small fragments of other Latin inscriptions from large marble slabs were found, likewise great quantities of broken roof tiles and pottery, and many inscribed Rhodian amphora handles. These discoveries, illustrating chiefly the period of the Roman domination in Palestine, are interesting and important, and others of like character probably await us.

It is, however, Hebrew remains which are the special object of our search at Samaria. At two points large building blocks on or near the rock were found with markings such as are believed to have been made by Hebrew masons. At one of these points was found a very massive wall which seems to be certainly Hebrew, but owing to the great depth of débris and the late date of the discovery it was not

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possible to dig out any considerable portion of this wall the present year. At several points on the summit our clearings reached the rock, but at no point did such clearing cover more than a few square feet. With the enlargement of the area thus cleared we may confidently hope that our search for Hebrew buildings will be rewarded.

The city wall is over two and a quarter miles in circuit and comprises an area of about two hundred acres. It is quite possible that some of the most important buildings within this area did not stand on the top of the hill. Such as may have stood there have been partly torn to pieces for the erection of later buildings, but it seems hardly probable that this process of destruction has extended to all parts of the mound.

As is always the case in such excavations, a commissioner representing the Imperial Museum at Constantinople attended our work at Samaria. It is his duty to see that the law relating to antiquities is observed and to take possession for the Museum of such objects as may be found. It is a pleasure to testify to the courteous consideration given to us and our work by their Excellencies Hamdi Bey and Khalil Bey of the Imperial Museum.

DAVID G. LYON, *Curator.*

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# THE FOGG ART MUSEUM

To the President of the University: —

Sir, — I have the honor to present the following report on the Fogg Art Museum for the year 1907–08.

At a meeting held in February last the Museum Committee voted to purchase, out of the income of the Prichard fund, a picture attributed to Bartholomäus Zeitblom, a German painter of the close of the fifteenth century, who is supposed to have been a fellow pupil with Albert Dürer of Martin Schongauer. Waagen speaks of him as of all painters the most thoroughly German. The subject is the Visitation. It is on panel, in excellent condition, and a fine example of the German art of its time. The Museum has received, as an indefinite loan from Mr. Roger A. Derby, of New York, an Italian picture of the sixteenth century, attributed to Luini. The subject of this picture is the Virgin and Child with St. Catherine. A limestone relief of ancient workmanship from Palmyra has been given to the Museum by Messrs. Edward W. Forbes, '95, Richard Norton, '92, and Alden Sampson, '76; and Mr. James Loeb, '88, has given 48 casts of ancient marbles, bronzes, and terra-cottas from the collection of the late Professor Furtwängler, of Berlin. A collection of 65 small pieces, consisting of Greek terra-cotta figurines, lekythoi, and other vases, has been lent by the Misses Upham of Cambridge.

To the Gray Collection of Engravings has been added, by purchase from the income of the Gray Fund, a print of the Samson and Delilah engraved by Lucas van Leyden. To the Museum collection of prints have been added two lithographs of mediaeval French architecture — gifts from Mr. T. W. P. Rogers, of Manchester, N. H., and eight small line engravings given by Mr. T. H. Thomas, '03.

Mr. James Loeb has added to his last year's gift of $1000, for the purchase of 17 lead-pencil drawings by Turner, the sum of $210 for a case to contain these drawings, which are now on exhibition in the large upper gallery. These lead-pencil drawings, together with our fine series of original water-color drawings (which have been mentioned in previous reports), afford valuable illustration of the character and range of Turner's genius.

From Mr. Walter M. Cabot, '94, the Museum has received, as an indefinite loan, a small collection of Japanese works of art, consist-



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ing of drawings, paintings, and ornamental carvings. These have been arranged by Mr. Cabot, in cases provided by him, in the small south-east room on the ground floor.

To the collection of photographs 1,926 additions have been made, comprising illustrations of English and French mediaeval architecture, and Italian, English, Dutch, Flemish, German, Spanish, and French painting. The Museum has received, also, the annual issue of the Arundel Club, consisting of twenty photogravures from paintings in English collections, for which we have subscribed.

Ninety-eight slides, illustrating Egyptian and Greek sculpture, Dutch and Early French painting, and some architectural monuments, have been added to the collection.

To the Museum collection of books 42 volumes have been added, of which 21 were gifts from the late Professor C. E. Norton, Mr. James Loeb, and others. From the income of the Prichard fund were purchased the Winchester charts of Italian painters. From the income of the Searle fund were purchased: the Decalogus, Septimania Poenalis, Symbolum Apostolicum, 1 vol., and Giulio Campagnola — publications of the Graphische Gesellschaft; Donatello, of the Klassiker der Kunst series; three works of Lehrs, Der Meister W $\frac{A}{2}$, Der Meister der liebesgarten, and Wenzel von Olmütz; Jullien de la Boullaye, Jean Duvet; Tuer, Bartolozzi and his works, 2 vols.; Lady Dilke, French Engravers of the XVIII$^{th}$ century; Kristeller, Kupferstich und Holzschnitt in vier Jahrhunderten; British Museum Catalogue of Vases, vols. III and IV, and several other catalogues.

The number of photographs catalogued during the year was 1,481; the total number now catalogued is 37,901; there remain uncatalogued 3,551, and the total number now in the collection is 41,452.

The number of slides catalogued was 98, and the total number of slides now in the collection is 3,752. During the summer the annual examination was made, and every photograph and slide was accounted for.

Photographs were lent 235 times to various departments and members of the University, to Radcliffe College, to the Cambridge Latin School, to the Austin Street Sunday School, to the Boston Museum of Fine Arts, and to a few outsiders. Slides were lent 217 times to Radcliffe College, to the Department of Architecture, to the Boston Public Library, to Dartmouth College, and to a few individuals.

The number of visits to the photograph collection for purposes of study was 655. Of these 532 were by members of the University. The sum of $17.45 was received from the sale of photographs and catalogues.

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In the print department 850 prints were catalogued, 23 prints and 640 photographs were mounted for the Museum, and prints and photographs were mounted for other departments of the University and for outsiders, for which the Museum has received the sum of $78.18.

The number of visits to the print collections for purposes of study was 414, and of this number 378 were by members of Harvard University and Radcliffe College. Upwards of 300 hours were spent by the keeper of the prints in showing them to these students.

In April last Mr. Francis Bullard, '86, deposited in the Museum, as an indefinite loan, a considerable collection of rare prints, including works by the French engraver Gaillard, of which our collections afford no examples, and a large number of line engravings and mezzotints after Turner, comprising the Southern Coast of England series, the Harbours of England, India, the Copperplate Magazine, Hakewill's Italy, and some other works. This collection consists of the finest impressions, nearly all of them being engraver's proofs, including a few touched by Turner himself.

The collections, both of original works of art, and of photographs and other reproductions, have grown to such an extent that every part of the exhibition space is now crowded, and it will be impossible to find room for many new accessions without some enlargement of the building. The Fogg Museum now has an equipment for the purposes of teaching unequalled by that of any other university museum in the country, and its collections are notable for range as well as for quality.

CHARLES H. MOORE, *Director*.

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## THE GERMANIC MUSEUM

To the President of the University: —

Sir, — Among the additions made to our collections during the current year should first be mentioned a cast of Peter Vischer's statue of Theodoric, a gift of the Bostoner Deutsche Gesellschaft. This is a companion figure to Vischer's King Arthur and the Emperor Maximilian already in our possession. While not possessing the same simple repose as the Arthur, and while foreshadowing in its somewhat fantastic grandeur the exaggerated forms of the Baroque period, this statue certainly shows the picturesque impressiveness of German Renaissance art, and is, next to Arthur and the kneeling Emperor himself, the finest part of Emperor Maximilian's Monument at Innsbruck. Sometime we hope to be able to reproduce this monument in its whole setting.

Mr. Henry W. Putnam, of Boston, has given the sum of one hundred and fifty dollars, to be spent for the purchase of books on German art.

The propaganda for a new building has been actively carried on during the present year. The Curator has tried to arouse interest in the cause by speaking on it before the American Philosophical Society at Philadelphia, the International Historical Congress held at Berlin in August, and elsewhere; and by publishing such articles as *Die Aufgaben und Ziele des Germanischen Museums der Harvard Universität* (Internationale Wochenschrift, Berlin), and *Emperor William's Gifts to Harvard University* (International Studio, New York).

The great event of the year was the announcement made on August 10, by the American Ambassador to Germany, before the International Historical Congress at Berlin, that Mr. Adolphus Busch of St. Louis had offered to give $50,000 toward a building fund of $300,000. The official report of these proceedings, published in the Berlin *Vossische Zeitung*, was as follows: —

At the opening of the fourth session of the International Historical Congress, the President, Privy-Councillor Dr. Koser, announced that the American Ambassador, Dr. Hill, had a communication to make. Dr. Hill spoke as follows: —

"Mr. President, Members of the Congress, — On November 10, 1903, the anniversary of the birth of the poet and historian Schiller,



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there was opened at Harvard University a Germanic Museum, a museum intended to shelter and to bring to view typical and representative works of German art. This museum has meanwhile received such numerous additions that it may now be designated as one of the most complete of its kind. His Majesty the German Emperor has not only repeatedly expressed his warm interest in it, but he has enriched it by a number of valuable gifts which, as a token of his friendly feelings for the United States of America, have been received with particular gratitude and satisfaction. The historical value of the museum is already great, and perhaps it will at no distant time be the most significant representation of old world art on the soil of the new. It gives me, therefore, particular pleasure to be authorized to announce that a well known American citizen, Mr. Adolphus Busch of St. Louis, President of the Germanic Museum Association, has offered the sum of $50,000 — about a sixth of the whole amount needed — for the erection of a worthy museum building."

The President, Privy-Councillor Dr. Koser, expressed in warm words the thanks of the Congress and the hope that the generous gift of Mr. Busch would contribute to promote still further the understanding of German culture in America. Thereupon Professor Kuno Francke, Curator of the Germanic Museum, spoke as follows:—

"It is not easy for me to add to the words of Dr. Hill and Dr. Koser anything worthy of the moment. My first, and I may say also my last feeling, is that of gratitude, gratitude both toward my old German fatherland and toward the land of my adoption.

"Every time that I have come to Germany in the service of the Germanic Museum, I have drawn new strength from the contact with German soil. The first time, in November, 1901, I was received here in Berlin by the news that His Majesty the German Emperor had generously decided to give to our Museum a collection of reproductions of German sculptures of the Middle Ages and the Renaissance such as no other museum of the world possesses. A few months later I was permitted, again here in Berlin, to witness the formation of a committee by representative men — I mention only Dr. Althoff, Dr. Schöne, Director Gwinner, and Dr. Lessing, — who soon succeeded in supplementing the imperial gift by a popular one: that exquisite collection of galvanoplastic reproductions of German metal work from the twelfth to the eighteenth century which also is well nigh unique. When three years ago I revisited Germany, I was met in two other German cities by welcome news. In Dresden I heard that His Majesty the King of Saxony intended to

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give us one of the finest specimens of Saxon art of the thirteenth century: the pulpit of Wechselburg; and in Nuremberg I learned that the government of that old imperial town was about to give us a reproduction of one of the most characteristic works by Adam Kraft: the relief of the Town-weigher. And now to-day, again on German soil, I hear that at last America also is to take an active part in the creation of a German national sanctuary in the New World.

"Let me confess it. It began to be a national humiliation that the Germans in America were so slow to respond to the generous initiative of the German Emperor. It began to burn into our hearts that the noble representatives of German art which the Fatherland had sent us across the sea had to be huddled together in an old, superannuated gymnasium. Now at last, through the generous offer of which we have heard to-day, the prospect is opened of a worthy home for German culture in America. The German House on New England soil is now only a question of time. It is for us not to rest until it has been completed."

I have so often in these annual reports insisted on the urgent necessity of a new and permanent building that I shall add only one word. The work achieved by our own Museum is a matter of public record. It has for the first time opened the eyes of large numbers of Americans to the dignity and beauty of ancient German art. It has given the first impetus to the interchange of professors between America and Germany now in force. It has opened the way for exhibitions of modern German art in America which now have successfully been initiated. It seems a clear demand of justice that an understanding of such wide-reaching and beneficial effects to the country should be vigorously supported by the country at large. Let us hope that Mr. Busch's $50,000 will within a few months have swelled to $300,000.

KUNO FRANCKE, *Curator.*

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## COLLECTION OF CLASSICAL ANTIQUITIES.

To the President of the University: —

Sir, — As Curator of Classical Antiquities, I have the honor to present the following report for the year 1907–08.

To the Collection of Classical Antiquities in Sever 25 and 27 the principal accessions have been: Three papyri from Oxyrhynchus, containing a fragment of Demosthenes' oration against Timocrates, scholia to the Iliad, and a private letter, loaned by the Semitic Museum; a collection of fragments of Greek pottery and 121 lantern slides, loaned by Professor J. M. Paton, '84; an interesting early hydria from Thera, presented by Professor Paton and Dr. A. S. Pease, '02; a Roman bronze stamp in the form of the sole of a foot, presented by Mr. Daniel B. Fearing; a model of a Roman bit, presented by Mr. Robert E. Lee; a large Roman amphora from the museum at Chester, presented by Mr. H. W. Nichols, '07; two Roman inscriptions, presented by Dr. A. S. Pease; 275 duplicates of Greek, Roman, and Byzantine bronze coins from the collection in Gore Hall, deposited by Dr. Malcolm Storer, '85, Curator of Coins; and 9 models of Roman furniture, utensils, etc., made by students in Latin 10, and deposited by Professor M. H. Morgan, '81. The latter form an interesting and useful group among the objects in the Collection, and one that is likely to be considerably increased in the future.

The Scott Collection of monuments relating to Julius Caesar has been removed from the Fogg Museum, owing to the necessity of providing for additions to the collections there, and is now exhibited in Sever 25 and 27. During the year this collection has been increased by three important casts, one from the bust No. 1331 in the Royal Museum at Berlin and two from the two busts in the Hermitage Museum at St. Petersburg. These casts represent the three monuments which Mr. Scott himself regarded as most important to complete his collection. Permission to make them was obtained by means of letters from the President to the American embassies at Berlin and St. Petersburg, and they were paid for by special appropriations made by the Corporation. A duplicate cast of the black basalt bust in Berlin has also been received, as a gift from the Hon. Charlemagne Tower, '72.



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The additions to the collection of slides in Harvard 1 number approximately 110, making the total number of slides in the possession of the Department of the Classics over 4,000.

In the work of cataloguing the various collections under the Curator's charge, considerable progress has been made. The original Pfeiffer-Hartwell collection is now entirely catalogued, and during the present year the catalogue of all the objects in Sever 25 and 27 will probably be completed.

As the Collection of Classical Antiquities grows, the need of specimens illustrative of Greek art and archaeology becomes constantly more marked. The greater part of the objects which have so far found their way to Sever 25 and 27 consists of works of the Roman period or reproductions of such works. A gift of $200 from Mrs. Schuyler Van Rensselaer, of New York, will perhaps make it possible to remedy this defect to some extent by purchases, but in the main we must rely not on purchases, but on gifts, and it is greatly to be hoped that some of these at least will consist of specimens of Greek minor art. By the addition of a few good Greek vases, bronzes, gems, and terra-cottas, the usefulness of the collection could be very largely increased.

GEORGE H. CHASE, *Curator*.

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# SUMMER COURSES OF INSTRUCTION

To the President of the University: —

Sir, — As Chairman of the Committee on Summer Courses of Instruction I have the honor to report on the Summer School of Arts and Sciences.

The Summer Courses are intended primarily for teachers in service and others preparing to teach, but they are planned to be helpful also to undergraduates wishing to use a part of their vacation for study, and are open to all qualified men and women who can profit by them.

The Committee was able to offer in the Summer School of 1908 a greater number and variety of courses than had been presented in any former year.

Ninety courses were given as against seventy-six last year. These included: one in Anthropology, one in Astronomy, two in Botany, seven in Chemistry, four in the Classics, five in Education, nine in Engineering, nine in English, six in the Fine Arts, five in Geology and Geography, three in German, six in History and Government, five in Mathematics, two in Music, six in Philosophy and Psychology, eight* in Physical Education, two in Physics, four in Public Speaking and Reading, and five in the Romance Languages.

Instruction was provided by seventeen of the twenty-five departments of study in the Faculty of Arts and Sciences. The Departments providing courses are noted above. Those in which no courses were offered were: Semitic Languages and History, Indic Philology, Comparative Literature, Political Economy, Forestry, Zoölogy, Mineralogy and Petrography, Mining and Metallurgy.

The Summer School Committee received the cordial coöperation of the Chairmen and members of the several Departments in which summer courses were offered. It is the practice of the Committee to leave the choice of instructors and the determination of the scope and character of a summer course largely in the hands of the Department or Division Committee concerned, in order that the summer courses may fairly represent the regular College work in all essential particulars.

* In Physical Education there are two four-year series of courses, the one in Theory and the other in Practice. Each year of each series is made up of a number of different courses from which the student chooses his work.



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The number of courses accepted for a degree in Harvard University was considerably augmented in 1908 — the number being sixty-four as compared with forty-nine in 1907. Of the courses accepted for a degree, twenty were suitable for the master's degree as well as for the bachelor's.

The acceptance of a summer course for a degree rests in every case upon the sanction of the Department first and then upon the approval of the Faculty of Arts and Sciences.

It should be noted that the courses in Engineering, given in the summer at Squam Lake and in Cambridge, are the regular courses in Surveying and Shopwork provided by the Division of Engineering for College students, but they are open also to others who register in the Summer School. These courses are, therefore, under the supervision of the Division of Engineering and not of the Committee on Summer Courses.

The titles of the summer courses, the names of the instructors, and the classification of the members in each course may be found in the Report of the Dean of the Faculty of Arts and Sciences, pages 88 and 89.

Instruction was given by sixty-eight instructors and assistants, exclusive of the instructors in Physical Education. Of the sixty-eight, fifty were members of the Harvard staff, and eighteen were invited from other institutions. Of those from the Harvard staff, twenty-one were of the rank of professor or assistant professor, nineteen were of the rank of instructor, and ten were of the rank of assistant.

The instructors from other institutions were: Professor Alcée Fortier, Tulane University; Professor A. E. Hancock, Haverford College; Professor William MacDonald, Brown University; Professor W. E. McElfresh, Williams College; Professor E. O. Sisson, University of Washington; Dr. F. E. Spaulding, Superintendent of Schools, Newton; Assistant Professor W. C. Brenke, University of Nebraska; Assistant Professor M. A. Chrysler, University of Maine; Assistant Professor E. M. Lewis, Williams College; Assistant Professor J. P. Marshall, Boston University; Assistant Professor J. M. Wolfe, Bucknell University; Mr. G. W. Evans, Principal, Charlestown High School, Boston; Dr. James Sullivan, Principal, Boys' High School, Brooklyn, N.Y.; Dr. O. S. Tonks, Princeton University; Mr. J. C. Barnes, North Georgia Agricultural College; Dr. W. E. Lunt; Mr. J. W. Rankin, Graduate Student, Harvard University; and Mr. H. M. Rideout, Author, Boston.

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In Physical Education there were thirteen lecturers, sixteen instructors, four pianists, and eight student assistants.

The enrolment in the Summer School of 1908 included 957 persons — a gain of 148 over the School of 1907.

The membership of the School included 545 teachers, 114 students in Harvard College,* 8 students in Radcliffe College, 21 students in other Departments of Harvard University, 53 former students of Harvard University, and 134 students from other colleges and universities: 294 members of the Summer School were holders of a Bachelor's degree, 55 were holders of a Master's degree, and 23 were holders of other degrees. In each of these groups except the last there was a substantial gain over the corresponding number for 1907.

It is noteworthy that of the 158 members of the courses in Physical Education 36 were graduates.

The membership included 468 women — a gain of 58 over 1907 — and 489 men — a gain of 90 over 1907. For the first time since 1895 the number of men exceeded the number of women. Five hundred and eighteen students registered from the New England States — a gain of 92; 143 from the Middle States — a gain of 1; 106 from the Southern States — a gain of 30; 97 from the states bordering on the Great Lakes — a gain of 10; 36 from the Western States — a gain of 3; and 57 from foreign countries — a gain of 12.

The income of the Summer School of 1908 was $28,083.25, of which $24,696.17 was received from tuition fees, $1,830 from registration fees, $1,507 from auditors' fees, and $50.08 from the historical excursions.

The total direct expenses amounted to $26,760.17, — of which $21,343.75 was for instruction; $1,699.60 for postage and publication; $2,059.60 for office expenses; $556 for laboratory charges; $124.09 for Phillips Brooks House; $155 for Appleton Chapel; $444.38 for Summer School receptions; $175 for historical excursions; and sundry administrative expenses aggregating $202.75. In addition to the foregoing there were other items of expense for lighting, heat, service, etc., which cannot well be disentangled from other like expenses in the University accounts.

* Of the 114 students who were registered in Harvard College in 1907–08, 37 took *two half-courses* in the Summer School and received a grade of C or higher *in both*, 11 took *two half-courses* and received a grade of C or higher *in only one*, while one took two and failed to receive credit for either; 47 took only *one half-course* and received a grade of C or higher, and 18 took only one half-course and failed to receive credit for it. *This count does not include College students registered in Engineering courses.*

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For the first time in many years no College dining hall was open in the summer of 1908. Members of the Summer School depended entirely upon such accommodations as were provided in private boarding houses and public restaurants in Cambridge. A considerable proportion of the members of the Summer School came from near-by places and lived at home, and a few made the daily round trip from places as distant as Fitchburg. It has never been possible to open any College dormitories for the use of Summer School students. The private accommodations are, however, more than sufficient for the needs of the School. There was surprisingly little dissatisfaction expressed with the arrangements for board and lodging in the Summer School of 1908; and the plan must be judged, therefore, to have proved in the main satisfactory. Cambridge housekeepers and restaurant proprietors supply substantial assistance to the School in this service.

The New England Passenger Association (including the principal railway lines in the New England States), the Trunk Line Passenger Association (including the lines in New York State, Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia, and West Virginia), and the Eastern Canadian Passenger Association (including the lines in Eastern Canada) granted such members of the Summer School of 1908 as desired it a reduced railway rate of fare-and-a-third on the "Certificate Plan." This enabled 169 persons to save $890.46 in travelling expenses. The School owes this help to the Secretary and other officers of the New England Passenger Association.

The necessary expenses to a student for the six weeks of the Summer School amount to about $80, — including tuition fee for one course, $20; registration fee, $2; and (estimating) meals, $30; room, $12; laundry, $6; and books and sundries, $10. When two courses are taken the fee for each course must be paid. As a rule, however, members of the Summer School take only one course; they are generally advised not to take more.

All of the necessary lecture rooms, laboratories, and other facilities for instruction in Cambridge were freely at the service of members of the Summer School, — including the College Library and Reading Room in Gore Hall, a Reading Room in Harvard Hall, a Text Book Library in Lawrence Hall, etc.

It is not practicable to open the Gymnasium for the general use of members of the Summer School owing to its use for the instruction given therein to the classes in Physical Education.

Numerous free afternoon and evening lectures and readings were given for the members of the Summer School. These included six

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evening readings from English Literature by Mr. C. T. Copeland; also four evening lectures: one by Dr. Frank E. Spaulding on "Salary and Service of Teachers," one by Professor R. M. Yerkes on "What is Animal Psychology?" one by Dr. A. M. Tozzer on "Picture-Writing and other Modes of Record among Primitive Peoples," and one by Mr. M. B. Gilbert on "Dancing: its Application and Advantages"; also ten afternoon lectures on the "Philosophy of Art" by Dr. H. M. Kallen, and six afternoon lectures on the "Poetry of Tennyson" by Dr. P. A. Hutchison, and three afternoon readings in connection with the courses in Public Speaking by Professor E. M. Lewis, Miss Elizabeth Ryan, and Mrs. Waldo Richards.

The usual arrangements were carried out in 1908 for historical excursions, for morning prayers in Appleton Chapel, for receptions in the Hemenway Gymnasium, for rest-rooms and parlor and writing-room in Phillips Brooks House, for recreation, etc.

The Summer School Committee is again under great obligations to the Bursar's Office, the Publication Office, the College Library, the Office of the Inspector of Grounds and Buildings, and the Recorder's Office, for their unfailing assistance; and to the Chairmen of the several Divisions and Departments for their help and advice in planning courses and in securing instructors.

The Association of present and former members of the Summer School is proving itself an efficient helper in promoting the success of the School. One cannot estimate too highly the value of the sympathetic coöperation, the friendly suggestions, and the willing aid which the Committee has received from the Summer School Association. The Summer School Committee owes its thanks to the Executive Committee of the Association, and especially to the President, Walter D. Head, Phillips Exeter Academy; to the Secretary, Florence E. Leadbetter, Roxbury High School; and to two members, Maud G. Leadbetter, East Boston High School, and Edgar L. Raub, John A. Andrew School, Boston.

It is a pleasure to acknowledge and to report here some of the activities of the Association during the session of 1908.

Headquarters were assigned to the Executive Committee in a convenient room on the first floor of Sever Hall. Here the Secretary or some member of the Executive Committee was present during the opening week of the School, and at stated hours thereafter, to give assistance to members of the Summer School in getting settled and started in their work.

The Association held its annual meeting on Monday evening, July 6, in Sanders Theatre, to welcome new members, to complete

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its organization, and to develop the spirit of coöperation among members of the School. Ex-Governor John D. Long, President of the Board of Overseers of Harvard College, welcomed the students on behalf of the Governing Boards; President Head of the Association explained the objects of the Association; and the Chairman of the Summer School Committee spoke on the purposes of the School.

Other interesting features of this meeting were: — choral singing by a choir of eighty children from the John A. Andrew School of Boston under the direction of their leader, Mr. Edgar L. Raub; the singing of popular songs by the audience; short addresses by speakers from the nations represented in the School, each using his native language; and the decoration of the theatre with fifty crimson banners, each bearing the name of a state or country having one or more representatives in the School of 1908, and contributed by Miss Maud Leadbetter.

At this meeting a new plan of conducting the Friday evening sociables was announced by the Chairman of the Summer School, and the aid of the Association was requested. It was proposed to place the four sociables in the hands of four groups of students: first from the New England States, second from the Middle States, third from the Central and Western States, and fourth from the Southern States. The plan was cordially received; and later each of these groups organized with officers and committees, who provided varied and interesting programmes for the general meetings of the Summer School on Friday evenings in the Hemenway Gymnasium. Incidentally these group organizations brought together informally students from the same state or from neighboring states for planning and for rehearsals, and promoted acquaintance and friendship. The Chairmen of the groups were Mr. Wilton L. Currier, De Meritte School, Boston, of the New England group; Miss Mary L. Gray, Public School No. 20, Borough of Queens, New York City, of the Middle States group; Mr. John C. Weigel, Jr., Lombard College, Galesburg Ill., of the Central and Western group; and Mr. J. W. Farmer, Louisville Academy, Louisville, Ga., of the Southern group.

The considerable number of trained singers in the Summer School were organized informally as a Glee Club under the leadership of Mr. Edgar L. Raub. Besides giving pleasure to its own members by their practice of singing, the Glee Club rendered most acceptable service on two public occasions.

The crowning event of the session of 1908 was the meeting in Sanders Theatre on the evening of Friday, August 7, when President Eliot addressed the School on "The Profession of Teaching in

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the United States." This was the first occasion when President Eliot had been able to accept an often repeated invitation to speak to the Summer School. The Hall was filled by members and friends of the School, from many states and foreign countries; and they were deeply impressed by the personality and speech of Harvard's leader. Many of those present heard him for the first time; and the cordiality of the welcome which he extended to them, and the inspiration of his counsel and presence, were treasured by persons who have carried his message to widely scattered schools and communities throughout the world.

The Glee Club contributed much to the meeting, both by its own songs and by leading in the singing of "Fair Harvard," "America," and other inspiring songs by the audience.

Representative speakers from different sections and countries expressed feelingly their appreciation of the opportunities Harvard gives them in the summer courses; and resolutions of thanks to the administrative officers of the School were unanimously adopted.

In conclusion I beg to call attention again to the statement of "Problems and Needs," pages 325–331 of your last Report; and especially to the need of endowment and for the provision of summer courses that will enable holders of a bachelor's degree who are teaching to win a master's degree without the necessity of sacrificing a year of time and salary.

JAMES LEE LOVE, *Chairman.*

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# RADCLIFFE COLLEGE

To the President of the University: —

Sir, — As Dean of Radcliffe College I have the honor to submit my report for the academic year 1907–08.

The number of students in actual attendance during the year was 427, as against 468 during the preceding year.

| | |
|---|---|
| Graduate Students | 61 |
| Seniors | 65 |
| Juniors | 62 |
| Sophomores | 96 |
| Freshmen | 63 |
| Special Students | 80 |
| Total | 427 |

At Commencement in June, 1908, seventy-seven students, three of whom had completed their residence in an earlier year, received the degree of Bachelor of Arts. Ten students, who had not been registered Seniors, received the degree, and one, who had been so registered, failed to receive it. Of the seventy-seven successful candidates, one received the degree *summa cum laude;* five received it *magna cum laude;* thirty-three, *cum laude.*

Twenty-three candidates received the degree of Master of Arts. Seven of the twenty-three had taken their first degree at Radcliffe; the others represented the following colleges: Bates College, Bryn Mawr College, University of California, Leland Stanford Jr. University, University of Michigan, Mt. Holyoke College, Oberlin College, Olivet College, Ripon College, Smith College, Tufts College, West Virginia University.

The degree of Doctor of Philosophy was conferred upon one candidate: Florence Alden Gragg, A.B. Radcliffe College 1899, A.M. 1906. Miss Gragg took her degree in the special field of Classical Philology; her dissertation was "De epigrammatis Graecis ante tertium a. C. n. saeculum quae sunt composita."

Examinations for admission were held on the 22d, 23d, 24th, 25th, 26th and 27th of June, 1908, in Cambridge, Andover, Brookline, Buffalo (N.Y.), Chicago (Ill.), Colorado Springs (Colo.), Concord, Fitchburg, Lowell, Lynn, Manchester (N.H.), Milton, New York (N.Y.), Philadelphia (Pa.), Portland (Me.), Providence (R.I.),



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Quincy, Seattle (Wash.), Springfield, Washington (Conn.), Worcester, and Youngstown (O.). They were also held in September in Cambridge.

Three hundred and forty candidates presented themselves for examination. Eleven were candidates for admission as special students. Thirty-four candidates took part of the examinations or worked off admission conditions. One hundred and seventy-four candidates took the preliminary examinations, and one hundred and twenty-one the final examinations. Sixteen candidates who took the examinations of the College Entrance Examination Board are included in the above classification; of these students, three were admitted to the Freshman class.

The results of the Final Examinations are given in the following table: —

| | Admitted. | Admitted "Clear." | Rejected. |
|---|---|---|---|
| June | 99 | 43 | 4 |
| September | 12 | 1 | 2 |
| Total | 111 | | 6 |
| Total rejected | 6 | | |
| Candidates in June who did not reappear in September | 4 | | |
| | 121 | | |

Ninety-three candidates were admitted as Freshmen in 1907. The entering class of 1908–09 numbers eighty-eight, ten of whom were admitted in previous years.

Sixty-one Graduate Students registered during the year, forty-three of whom were from other colleges. Thirty students were admitted to fifteen full courses, and twenty-nine students to fifteen half-courses, of the "Courses primarily for Graduates in Harvard University open to competent students of Radcliffe College."

The members of the Academic Board for 1907–08 were Professor Byerly (Chairman), and Professors E. L. Mark, S. M. Macvane, H. S. White, J. H. Wright, B. O. Peirce, A. A. Howard, G. L. Kittredge, and C. H. Grandgent.

The new Library was ready for use in April, and the books were transferred from the old building to the new during the spring recess. On the first day after the recess it was opened for work and for inspection, and, in the afternoon of that day, Dr. John Shaw Billings, Director of the New York Public Library, made a deeply interesting and suggestive address, on the subject of what a college library should do for a college student. He expressed himself as "specially pleased to see that the library purpose of the building had been the

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only object had in view, in plans and construction." The main reading-room is on the second floor, and is 96 feet in length, 50 feet in width, and 18 feet in height; it is a noble room, amply lighted throughout, and planned to allow the building of a gallery when more space for books is needed. On the third floor is a reading-room, as long and as wide, but not so high, as the one on the second floor. The "open shelf" system has always obtained in the Radcliffe Library, and the 22,000 books which constitute the present stock are all kept in the alcoves which line the walls of these two reading-rooms. On the first floor is a large room, lighted on three sides, and furnished through the generosity of a constant friend of the College, Mrs. Martha Fiske-Collord. This pleasant reading-room will accommodate ninety students, and has already done service as a seminary room. The provision for readers is ample for the present and for the future, so far as foreseen; the space for books is more than ample for the present, and capable of expansion far beyond any number ever contemplated for a working-library in the neighborhood of a great library like the Harvard Library or the Public Library of Boston. Should more space be needed for books or readers, or should the "open shelf" fall into disfavor, it will be possible to convert the first-floor study into a stack of three tiers, which will hold more than 100,000 volumes. Provision for such a change has been made in the construction, but the emergency is not likely to occur. A large room on the first floor is at present unassigned and remains unfurnished until it shall be found necessary to use it, and, also on the first floor, a room has been set apart as a memorial of Sarah Wyman Whitman.

This room has been fitted up by the friends of Mrs. Whitman and is a gift from them to the College which she loved, where it will keep her memory green, and will kindle in the hearts of generations to come the fire that quickened her spirit, — the love of beauty, the willingness to help, the sympathy with high ideals, the desire to beautify and to sweeten life. The room contains the stained-glass window which was Mrs. Whitman's last work, which has been moved from its position in Agassiz House and is here seen to great advantage.

The furniture is old oak, beautiful in design and color, and to the committee in charge, Mrs. George Tyson and Mr. J. Templeman Coolidge, Jr., as to the friends of Mrs. Whitman whom they represent, Radcliffe is deeply grateful. The room will be open to the students without restriction during the day, and it is intended to keep on the shelves the books on art and photographs belonging to the library, a collection lately increased by a gift from the executors

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of Mrs. Edward Wheelwright of valuable books and etchings belonging to her estate.

The building is of brick, simple and dignified, in harmony with the Gymnasium and with Agassiz House. In mass and effect it corresponds to the Gymnasium and completes the group of buildings in which the student's day, outside of the class-rooms and laboratories, is spent. The architects are Winslow and Bigelow, of Boston; the College has much to thank them for, among other things for the interesting circumstance that the cost of the building has not equalled the amount, $75,000, promised by Mr. Carnegie.

The endowment fund, on which Mr. Carnegie's gift of $75,000 depended, amounts to $80,000, and the equipment fund, raised by the Radcliffe Alumnae, to very nearly $20,000, the sum proposed by them, but rendered superfluous by the gift of the Whitman room.

It is just fifteen years since the preliminary steps were taken towards the organization of Radcliffe College and its affiliation to Harvard University. The dust lies deep on the disagreements and discussions of that time, and the policy adopted has been amply justified by the event. In the years 1883–94, the "Harvard Annex" A.B. certificate was taken by 68 candidates: in 1894 Radcliffe College gave its degree for the first time, to 25 candidates; in 1904, ten years later, to 117 candidates, 96 for the first degree, 21 for the second. The growth in numbers was not the only sign that the alliance with Harvard University was generally approved. Gifts, bequests, and legacies — the signs of public confidence in a college — have not been wanting, and the money for the new buildings, for scholarships and various specific purposes included, we have actually received somewhat more than $1,265,000. Radcliffe is one of the beneficiaries by the will of Mrs. Martha Fiske-Collord, who died in Cairo in January, 1908. The college is also the ultimate heir of two valuable estates, and it has been found advisable to obtain from the Legislature permission to increase the holding from two millions to five. This summing up is not out of place at this time; the true strength of Radcliffe lies in its affiliation to Harvard University; that alliance was brought about with your sanction and under your leadership, and to you the gratitude of this little college, as of the great university of which it forms a part, is due, and will be due forever.

AGNES IRWIN, *Dean.*

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# APPENDIX

## REPORT OF THE CHAIRMAN OF THE COMMITTEE ON ADMISSION

To the President of the University: —

Sir, — I have the honor to submit to you my report as Chairman of the Committee on Admission. During the past year the Committee have received and acted upon nine hundred and thirty-one applications for admission to Harvard College and one hundred and forty-four applications for admission to Radcliffe College. The action of the Committee upon applications for admission to Harvard College may be summarized as follows: —

### I. Applications for Admission to the Freshman Class by Examination

*Candidates for the Degree of A.B.*

| | |
|---|---|
| Admitted without conditions | 236 |
| Admitted with conditions | 216 |
| Total number permitted to register as Freshmen | 452 |
| Admitted provisionally to registration as Special Students | 10 |
| Refused admission | 58 |
| Candidates in June who did not reappear in September | 35 |
| Total number of candidates for A.B. | 555 |

*Candidates for the Degree of S.B.*

| | |
|---|---|
| Admitted without conditions | 17 |
| Admitted with conditions | 60 |
| Total number permitted to register as Freshmen | 77 |
| Admitted provisionally to registration as Special Students | 2 |
| Refused admission | 38 |
| Candidates in June who did not reappear in September | 16 |
| Total number of candidates for S.B. | 133 |

*Combined Table showing Total Number of Applications for Admission to the Freshman Class by Examination*

| | |
|---|---|
| Admitted without conditions | 253 |
| Admitted with conditions | 276 |
| Total number permitted to register as Freshmen | 529 |
| Admitted provisionally to regis ration as Special Students | 12 |
| Refused admission | 96 |
| Candidates in June who did not reappear in September | 51 |
| Total number of applicants | 688 |



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*Preliminary Examinations*

In addition to the 688 Final candidates accounted for in these statistics, examinations were taken by 922 young men who wish to divide their examinations among several examination periods. These young men registered as follows:—

| | |
|---|---|
| Candidates for the degree of A.B. | 771 |
| " " " " " S.B. | 151 |

II. Applications for Admission without Examination from Other Colleges and Scientific Schools

| | |
|---|---|
| Admitted provisionally as Special Students with promise of re-rating in accordance with record of first year in Harvard | 78 |
| Admitted as Freshmen | 5 |
| " " Sophomores | 14 |
| " " Juniors | 17 |
| " " Seniors | 1 |
| Advised to enter a graduate school | 8 |
| Refused admission | 20 |
| | 143 |

III. Applications for Admission as Special Students without Examination

| | |
|---|---|
| Admitted | 63 |
| Refused admission | 37 |
| | 100 |

A comparison of the figures in Table I with the corresponding figures for previous years shows an unusual decrease in the number of applicants for admission; and further investigation has shown that this decrease is wholly in New England and the adjacent states. Many causes, no doubt, contributed to this result, some of which are but temporary; but two probable causes which may continue to decrease the number of applicants for admission deserve serious consideration. These are (1) the practical isolation of Harvard in the territory from which she must necessarily draw the largest number of her students, owing to the fact that admission from high schools can be secured only by examinations which require a special preparation, and (2) an apparently growing dissatisfaction with the course of study prescribed by the College requirements. The first is drawing away young men to the other colleges that admit on certificates, because they can enter those colleges at least a year earlier than they can enter Harvard. The second is turning young men away from college altogether. All the difficulties that arise from these two causes are difficulties less of the amount and quality of the work required for admission than of methods of admission. For example,

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a young man may have completed a four-year high school course with credit, and yet if he has never thought of entering Harvard, and planned accordingly, be unable by the Harvard methods to show that he should be admitted. While there may be little doubt that his quality is such as to make him a desirable student, he may find it very difficult, if not impossible, to demonstrate that quality by the methods he is compelled to use. For it should be observed that the Harvard method is a method of *deferred* examinations — a method which, while offering no very difficult tests to the specially trained boy who knows several years in advance that he is coming to Harvard, does create difficulties that have no educational advantages for the boy not so trained who does not know in advance that he is coming to Harvard. It is this aspect of our methods that greatly limits the scope of our influence, and creates difficulties for high schools by crowding the last two years of a school course with studies which must be carried merely for examination purposes. If this method were necessary in order to insure on the part of those we admit ability to do the particular work of the College, or if the obstacles created by these methods secured unmistakably students of superior intellectual quality, there would be little cause for anxiety; but inasmuch as no single prescription can be justified on the ground that College work of good quality cannot be done without it, and inasmuch as these methods do not prevent the admission of students who have few or no intellectual interests, there is good ground for believing that our methods of admission are not well adjusted to the changing conditions of the work that precedes and the work that follows admission. Instead of serving to define the boundaries of school and college, our methods of admission tend to confuse the functions of both, to prevent the schools from developing in accordance with local needs, and to some extent to impair the quality of College instruction.

This confusion as to the functions of high school and college that grows out of our present methods of admission is illustrated in the records of men admitted with extra examinations and men admitted with conditions. Of the men who were admitted without conditions this year, one hundred and twenty-one passed more examinations than are required for admission; and of the men admitted with conditions fifty will have in their records, when they have removed conditions in specific subjects, more examinations than are required for admission alone. About one-third of the whole number admitted as Freshmen did more work in school than the admission requirements called for. On the other hand, the number of men admitted with conditions, though tending to diminish under new methods of administering examinations, still amounts to more than half the whole number admitted. The following tables exhibit the extent to which high school work tends to run into the college: —

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PROPORTION OF MEN ADMITTED WITH CONDITIONS IN PRESCRIBED SUBJECTS

| *Candidates for A.B.* | Per Cent. | *Candidates for S.B.* | Per Cent. |
|---|---|---|---|
| English | 3.7 | English | 3.8 |
| Greek or Latin | 3.9 | German or French | 14.2 |
| German or French | 5.5 | German and French | 1.2 |
| History | 3.9 | History | 11.6 |
| Algebra | 3.3 | Algebra | 0.0 |
| Plane Geometry | 5.3 | Plane Geometry | 1.2 |
| Science | 15.4 | Solid Geometry | 20.7 |
| | | Science | 5.1 |

PROPORTION OF MEN ADMITTED WITH CONDITIONS IN ELECTIVE SUBJECTS

| *Candidates for A.B.* | | *Candidates for S.B.* | |
|---|---|---|---|
| Points. | Per Cent. | Points. | Per Cent. |
| 1 | 32.0 | 1 | 58.4 |
| 2 | 29.6 | 2 | 45.4 |
| 3 | 12.6 | 3 | 29.8 |
| 4 | 9.0 | 4 | 19.4 |
| 5 | 3.0 | 5 | 11.6 |
| 6 | 1.9 | 6 | 3.8 |

A study of the admission records shows that a school which has the single-minded purpose of preparing boys for College, though its work is often hampered in vexatious ways by lack of uniformity in College requirements, can prepare boys to pass examinations which the College will accept as the equivalent of a year's — or nearly a year's — work in College. On the other hand, it appears that the College insistence on special subjects, and special ways of teaching those subjects, results in the admission of the majority of a Freshman class under conditions which prolong school work into the College itself. On the one hand, we have students who have gained a sufficient impetus from their schools to carry them through College by an exceedingly small amount of work, their extra credit being an insurance against failure in the proper work of the College; on the other hand, we find men whose advance is checked and hindered by the necessity of complying with the specific requirements which in many cases have no relation whatever to their College work.

This state of things is the inevitable result of methods of admission which are not based upon a conception of the high school as a school having a function of its own, and which test not so much the individual as the course he has pursued before coming to College. We need a method which will select boys able to do College work, not College work in certain subjects merely, but College work in general, for they are admitted to courses

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of their own making. What we actually have is a method which selects not so much the well-prepared boy as the boy prepared in specific ways. It is evident that a method that thus undertakes to prescribe the kind of training must greatly restrict our choice of students, and must retard the development of those departments of the College for which the kind of training prescribed is not altogether a natural preliminary. During the last forty years, the College has changed greatly in character; and its departments of instruction have more than doubled, yet the methods of admission still tend to restrict incoming students to those whose natural preferences are for the older departments. While both schools and College have greatly changed, the requirements for admission have remained nearly stationary. It must also be evident that a method which attempts to prescribe a specific kind of training must interfere greatly with the natural development of schools, and impose restrictions on their work, which if applied to the College by a graduate school would appear at once as an intolerable interference with academic freedom. What should be done is not so clear as that there exists a situation that demands a remedy; but the acceptance of and the endeavor to realize certain principles would help greatly to clear away the difficulties of the present situation. Instead of using admission examinations in such a way as to obscure the boundaries of school and College work, every effort should be made to keep the two distinct. Instead of attempting to discriminate among the subjects taught in schools, the College should recognize every subject that is taught, both in the school and in the College. Instead of attempting to prescribe methods of instruction, the College should help the schools to secure the freedom that it rightly demands for itself. By revising its requirements in accordance with these principles, the College can do much to enable the schools to become more efficient, and to secure for itself a constant stream of fresh energy and power to accomplish its own work.

A step was made last year in the direction of a clear division of school and College work by the adoption of new regulations for the anticipation of College work. These regulations will not go into effect, however, until after June, 1909. After that date, any applicant who wishes to gain credit for College work beyond the requirements for admission, must take instead of extra admission examinations, as heretofore, special examinations based on College courses. These regulations will certainly help to a clearer understanding of what admission examinations should be, will reduce somewhat the temptation to take a large number of studies at the expense of doing nothing well, and will provide more nearly adequate tests for the anticipation of College work.

Another instance of progress in the directions indicated above is afforded this year by the records of men admitted without conditions. Three years ago, our examinations were administered under rules which narrowly restricted the number that could be taken at one time, the parts into which they could be divided, and the credit that could be secured unless certain conditions were fulfilled. These prescriptions were an attempt on the

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part of the College to control the school course. As it appeared that they constituted a serious interference with the freedom of schools to do what was right and just in individual cases, they were abolished. The results, in the shortest time in which they could be seen, have fully justified this step. Each year the number of men admitted with conditions has been reduced; and this year, for the first time, the number of men without conditions entering as candidates for the degree of A.B. exceeds the number entering with conditions. A discontinuance of these rules has made better work possible both for the schools and for the College. In the schools, the testimony of teachers is unanimous that more work, and work of better quality, is possible, because boys are not to such an extent compelled to mark time in subjects carried merely for examination purposes: in the College, we have fewer men in elementary courses taken for no purpose except to remove admission conditions. The success of this experiment in freedom should lead to further reduction of prescriptions that interfere with the work that precedes College.

Another means of extricating ourselves in part from the confusion which attends present relations of schools and colleges and of advancing toward a greater freedom both for ourselves and for others is afforded by the College Entrance Examination Board. Our alliance with the Board is now in its fourth year, and has proved very successful. Through the Board, we have been able to extend our influence into districts which we could reach in no other way; and by means of the Board examinations we have added to our list of new schools twenty-nine, of which twenty-five are outside of New England. Thus far, we have merely accepted certain Board examinations as substitutes for corresponding examinations of our own, reserving the privilege of re-reading and re-grading the books — a practice which has increased the expense and complexity of our administration of admission without compensating benefits. We shall simplify our own work and at the same time advance the cause of reasonable uniformity in College requirements, and consequently of better relations between schools and colleges, if we throw the whole weight of our influence into the Board, accepting the Board definitions of admission subjects, and withdrawing our own examinations wherever possible.

The argument in favor of this is that the Board represents a better idea than the admission requirements of any one college can ever be made to realize, and that it possesses the best means of attaining results such as all desire. Thus, the Board's definitions of admission subjects have a national character which the definitions made by any one college can never attain. Then, too, the organization of the Board provides for a coöperation between schools and colleges which insures for its papers the kind of advice and criticism the lack of which in our own is the cause of endless friction. And, more important than all, the Board provides by its committees of review a means by which there can be a constant readjustment of college tests to the ever changing conditions of school

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and college work. In all these respects our own examinations represent an idea less worthy of realization, or are open to unfavorable criticism, — our definitions of admission studies cannot hope to attain national recognition, we have no provision for obtaining the coöperation with schools which is necessary in preparing suitable examination papers; and we have no provision for the readjustment of methods of admission which the constantly changing conditions of the schools render necessary. In so far as we maintain peculiar methods of admission, we restrict our own influence and increase the difficulties of secondary school education.

If we should accept the Board definitions and withdraw our own examinations, we should probably merely hasten a process which has already begun and won approval. A number of schools that regularly send boys to Harvard adopted last year the Board examinations as the only examinations for their students. Inquiry of these schools as to the success of their experiment brought out the fact that without exception they intend to use only Board examinations in the future. The reasons given for this decision are the practical convenience and the economy of time and energy in preparing for but one set of examinations, the greater uniformity of standard obtainable by the Board, and the greater adaptability of the Board examinations to secondary school students.

We have ourselves also taken a few steps in the direction of exchanging our own examinations for those of the Board, apart from the general acceptance of the Board examinations as substitutes. Two departments have adopted the Board definitions outright; and others are preparing to follow their example. There can be no question that the Board possesses superior methods of arriving at definitions of admission subjects that obtain general acceptance, and that general consent as to the limits of school and college work is very desirable.

Something has been done, therefore, toward the clearer definition and simplification of admission requirements; and the way has been prepared for greater improvement in the relations between schools and the College; but there is great need of experiment in every hopeful direction.

During the past two years, the Committee have been earnestly trying, as a preliminary to a reform of admission requirements generally, to improve all matters relating to the administration of Special Students. The general practice in American colleges with respect to this class of students has encouraged the belief that the term "Special Student" denotes students admitted with requirements below those which the College nominally demands. It has been the endeavor of the Committee so to administer this class of students as to insure as high a grade of attainment among Special Students as among all others; they have not waived the requirement of examinations for admission to the Freshman Class without being convinced that the applicant for admission as a Special Student has equivalent training, and that there were good and sufficient reasons for admitting him to the privileges of the University.

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In the tables given at the beginning of this report, Special Students are classified as follows: —

| | |
|---|---|
| Applicants for admission to the Freshman Class provisionally admitted as Special Students "on trial" | 12 |
| Applicants for admission to advanced standing provisionally admitted as Special Students, with promise of re-rating in accordance with their first year's record in Harvard | 78 |
| Applicants for admission as Special Students | 63 |

The first two classes, it will be noticed, constitute more than half the total number admitted as Special Students, but are men for whom such registration is merely provisional, pending their classification as candidates for a degree. Of the men in the second group who are applicants for advanced standing, every man has fulfilled the requirements for admission to another college, has completed in that college the work of one or more years, and has furnished evidence that his college work was of good quality, and such as to entitle him to promotion. Of the men in the third group, which is the only group made up of men who, for a great variety of reasons, ask for admission as Special Students, thirteen are men who were transferred to registration as Special Students from the Bussey Institution in order to facilitate the recent reorganization of that Institution. For most of these, special instruction is provided; and when they have completed their work the group will disappear completely — that is, there will never again be applicants of this kind. Three others of the third group are really students in the School for Social Workers, who are doing no work at all in Harvard College, and are registered as Special Students merely for convenience. One other of the third group is a student in the Episcopal Theological School, who is taking one course in Harvard College by a special arrangement with his School. This leaves in the third group, forty-six to be accounted for. With one exception, none of these men applied for admission directly from another school. The exception was a young man who had passed examinations for admission to another college and had been regularly admitted to that college. He differed from other men admitted as Freshmen only in the fact that most of his examinations were those of another college; and his admission as a Special Student was merely an extra precaution on the part of the Committee. The others had all been out of school one or more years. In admitting them to the privileges of the College, the Committee assured themselves that each had had a school training equivalent in amount to that upon which the instruction of the College is based, that they were men of good quality, and that they were able to do the particular work they asked the privilege of undertaking. The Committee required them to furnish evidence as to the quality of their school training, and as to the quality of their work since leaving school, waiving the usual requirement of examina-

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tions, which would manifestly be unfair tests in these cases, in view of evidence of general ability and seriousness of purpose. The average age of these men is twenty-five.

There remains, then, of the whole body of Special Students admitted during the last year only those of the first group, twelve in number, whose admission may be unfavorably criticised as the admission of men with requirements below those which the College nominally demands. These men took examinations for admission to the Freshman Class, and passed fewer examinations than the Committee were willing to recognize as sufficient for registration as Freshmen. In every case, however, there were reasons which seemed to the Committee sufficient for believing that the examinations did not truly represent the men's ability, and that they should be given a chance to demonstrate their ability to do College work. They accordingly allowed them to register provisionally as Special Students "on trial," with the understanding that they should withdraw at once if it appeared that the confidence of the Committee in their ability was not justified. These men might have been admitted as Freshmen heavily conditioned; and, perhaps, it would have been better to admit them to such registration. Their admission as Special Students was merely an extra precaution against keeping an unfit man in College longer than one term. At the time when this is written, all of these men have demonstrated their ability to do College work, having secured good records in the examinations of the first term.

This analysis shows, then, that the great body of Special Students is composed of men who are really upper classmen, and of men who are older than the average college graduate. Only one and one-sixth per cent of all the men admitted this year can be fairly described as men admitted with requirements less than the College nominally demands; and these men are only technically deficient.

I append to this report the usual statistics gathered year by year by the Committee on Admission.

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## Statistics from the Records of the Committee on Admission

*Classification of Candidates for Admission, both Final and Preliminary, according to Residence*

| North Atlantic Division: | 1906. | 1907. | 1908. |
|---|---|---|---|
| Maine | 18 | 28 | 21 |
| New Hampshire | 31 | 24 | 19 |
| Vermont | 6 | 11 | 8 |
| Massachusetts | 966 | 1051 | 992 |
| Rhode Island | 11 | 8 | 17 |
| Connecticut | 15 | 20 | 18 |
| New England | 1047 | 1142 | 1070 |
| New York | 236 | 230 | 197 |
| New Jersey | 33 | 25 | 28 |
| Pennsylvania | 70 | 63 | 59 |
| | 1386 | 1460 | 1354 |
| **South Atlantic Division:** | | | |
| Delaware | 5 | 3 | 3 |
| Maryland | 15 | 10 | 8 |
| District of Columbia | 13 | 11 | 9 |
| Virginia | 2 | 2 | 3 |
| West Virginia | 2 | 0 | 1 |
| Florida | 0 | 0 | 2 |
| Georgia | 2 | 2 | 3 |
| No. Carolina | 0 | 0 | 1 |
| | 39 | 28 | 30 |
| **Western Division:** | | | |
| Montana | 1 | 4 | 4 |
| Colorado | 5 | 4 | 3 |
| New Mexico | 1 | 1 | 0 |
| Arizona | 1 | 0 | 1 |
| Utah | 1 | 3 | 4 |
| Nevada | 1 | 1 | 0 |
| Idaho | 0 | 3 | 2 |
| Washington | 4 | 5 | 6 |
| Oregon | 5 | 4 | 5 |
| California | 18 | 18 | 10 |
| Wyoming | 0 | 1 | 2 |
| | 37 | 44 | 37 |
| **North Central Division:** | | | |
| Ohio | 51 | 62 | 51 |
| Indiana | 10 | 5 | 12 |
| Illinois | 36 | 35 | 37 |
| Michigan | 7 | 12 | 6 |
| Wisconsin | 9 | 14 | 13 |
| Minnesota | 9 | 8 | 10 |

| North Central Division: | 1906. | 1907. | 1908. |
|---|---|---|---|
| Iowa | 6 | 7 | 7 |
| Missouri | 16 | 12 | 17 |
| North Dakota | 2 | 1 | 0 |
| South Dakota | 1 | 2 | 3 |
| Nebraska | 3 | 0 | 2 |
| Kansas | 2 | 2 | 2 |
| | 152 | 160 | 160 |
| **South Central Division:** | | | |
| Kentucky | 3 | 3 | 2 |
| Tennessee | 4 | 4 | 2 |
| Alabama | 1 | 1 | 1 |
| Mississippi | 1 | 3 | 3 |
| Louisiana | 1 | 1 | 0 |
| Texas | 2 | 1 | 3 |
| Arkansas | 2 | 0 | 1 |
| Oklahoma | 1 | 0 | 1 |
| | 15 | 13 | 13 |
| **Foreign:** | | | |
| Brazil | 0 | 0 | 1 |
| Canada | 1 | 0 | 1 |
| China | 0 | 0 | 1 |
| Cuba | 1 | 2 | 0 |
| England | 2 | 2 | 0 |
| Germany | 2 | 0 | 1 |
| France | 0 | 2 | 1 |
| India | 2 | 0 | 0 |
| Ireland | 1 | 0 | 0 |
| Italy | 1 | 1 | 0 |
| Japan | 0 | 3 | 3 |
| Mexico | 1 | 0 | 0 |
| Russia | 1 | 0 | 0 |
| Switzerland | 1 | 0 | 0 |
| | 13 | 10 | 8 |
| **Insular Territories and Dependencies:** | | | |
| Hawaii | 5 | 9 | 5 |
| Philippines | 0 | 1 | 0 |
| Porto Rico | 0 | 1 | 2 |
| | 5 | 11 | 7 |
| **Home Unknown:** | | | |
| | 4 | 0 | 1 |
| Total | 1651 | 1726 | 1610 |

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## Ages of Men Admitted to the Freshman Class by Examination

| Ages. | Men. | Ages. | Men. |
|---|---|---|---|
| 13–14 | 1 | 20–21 | 35 |
| 14–15 | 1 | 21–22 | 8 |
| 15–16 | 8 | 22–23 | 4 |
| 16–17 | 45 | 23–24 | 1 |
| 17–18 | 139 | 25–26 | 2 |
| 18–19 | 182 | 26–27 | 1 |
| 19–20 | 102 | | |

## Values in Points of Examinations Offered and Passed by Applicants for Admission

*Candidates for the Degree of A.B.*

| Points Offered. | Men. | Points Passed. | Men. |
|---|---|---|---|
| 17 | 1 | 16 | 2 |
| 18 | 0 | 17 | 2 |
| 19 | 1 | 18 | 11 |
| 20 | 2 | 19 | 6 |
| 21 | 0 | 20 | 33 |
| 22 | 12 | 21 | 8 |
| 23 | 6 | 22 | 49 |
| 24 | 37 | 23 | 11 |
| 25 | 8 | 24 | 64 |
| 26 | 183 | 25 | 12 |
| 27 | 44 | 26 | 130 |
| 28 | 87 | 27 | 35 |
| 29 | 19 | 28 | 46 |
| 30 | 21 | 29 | 7 |
| 31 | 13 | 30 | 16 |
| 32 | 8 | 31 | 8 |
| 33 | 5 | 32 | 9 |
| 34 | 5 | 33 | 2 |
| | | 34 | 1 |

The average number of points offered by candidates for the degree of A.B. was 26.8.

The average number of points passed by candidates for the degree of A.B. was 25.

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*Candidates for the Degree of S.B.*

| Points Offered. | Men. | Points Passed. | Men. |
|---|---|---|---|
| 18 | 0 | 18 | 1 |
| 19 | 0 | 19 | 1 |
| 20 | 0 | 20 | 6 |
| 21 | 1 | 21 | 9 |
| 22 | 3 | 22 | 11 |
| 23 | 3 | 23 | 4 |
| 24 | 8 | 24 | 16 |
| 25 | 6 | 25 | 8 |
| 26 | 24 | 26 | 9 |
| 27 | 12 | 27 | 8 |
| 28 | 9 | 28 | 2 |
| 29 | 4 | 29 | 1 |
| 30 | 4 | 30 | 1 |
| 31 | 0 | 31 | 0 |
| 32 | 1 | 32 | 0 |
| 33 | 1 | 33 | 0 |
| 34 | 0 | 34 | 0 |
| 35 | 0 | 35 | 0 |
| 36 | 0 | 36 | 0 |
| 37 | 1 | 37 | 0 |

The average number of points offered by candidates for the degree of S.B. was 26.4.

The average number of points passed by candidates for the degree of S.B. was 23.7.

VALUES IN POINTS OF EXAMINATIONS PASSED BY APPLICANTS WHO WERE REFUSED ADMISSION

| | Candidates for the Degree of | | | Candidates for the Degree of |
|---|---|---|---|---|
| Points. | A.B. | S.B. | Points. | A.B. | S.B. |
| 0 | 2 | 1 | 11 | 2 | 4 |
| 1 | 0 | 0 | 12 | 7 | 0 |
| 2 | 0 | 0 | 13 | 0 | 5 |
| 3 | 0 | 0 | 14 | 5 | 1 |
| 4 | 4 | 2 | 15 | 2 | 3 |
| 5 | 1 | 0 | 16 | 4 | 1 |
| 6 | 7 | 4 | 17 | 1 | 4 |
| 7 | 2 | 1 | 18 | 6 | 2 |
| 8 | 4 | 3 | 19 | 0 | 1 |
| 9 | 3 | 1 | 20 | 1 | 1 |
| 10 | 7 | 4 | | 58 | 38 |

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CLASSIFICATION OF FINAL CANDIDATES FOR ADMISSION BY EXAMINATION IN 1906, 1907, AND 1908, ACCORDING TO THE SCHOOLS THEY ATTENDED

| | 1906. | 1907. | 1908. |
|---|---|---|---|
| Number of Public Schools | 117 | 125 | 126 |
| " " Private " | 67 | 62 | 53 |
| " " Endowed " | 36 | 36 | 37 |
| Total | 220 | 223 | 216 |
| Candidates from Public Schools | 337 | 346 | 307 |
| " " Private " | 254 | 254 | 204 |
| " " Endowed " | 214 | 198 | 177 |
| Total | 805 | 798 | 688 |
| *Percentage of Candidates from Various Kinds of Schools* | | | |
| Public | 41.8 | 43.3 | 44.6 |
| Private | 31.5 | 31.8 | 29.6 |
| Endowed | 26.5 | 24.8 | 25.7 |

The following tables exhibit the men classified above according to men admitted and men refused admission, and according to the degrees for which they are candidates: —

APPLICANTS ADMITTED IN 1906, 1907, AND 1908, BOTH CANDIDATES FOR THE DEGREE OF A.B. AND CANDIDATES FOR THE DEGREE OF S.B.

| | 1906. | 1907. | 1908. |
|---|---|---|---|
| Number of Public Schools | 85 | 93 | 95 |
| " " Private " | 48 | 46 | 40 |
| " " Endowed " | 30 | 31 | 28 |
| Total | 163 | 170 | 163 |
| Percentage of Public Schools | 52.1 | 54.7 | 58.2 |
| " " Private " | 29.4 | 27.0 | 24.5 |
| " " Endowed " | 18.4 | 18.1 | 17.1 |
| Candidates from Public Schools | 233 | 252 | 240 |
| " " Private " | 157 | 165 | 141 |
| " " Endowed " | 186 | 177 | 148 |
| Total | 576 | 594 | 529 |
| Percentage of Candidates from Public Schools | 40.4 | 42.4 | 45.3 |
| " " " " Private " | 27.2 | 27.7 | 26.6 |
| " " " " Endowed " | 32.2 | 29.7 | 27.9 |

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## Classification of Candidates for the Degree of A.B., Admitted in 1908

| | |
|---|---|
| Number of Public Schools | 84 |
| " " Private " | 38 |
| " " Endowed " | 27 |
| | 149 |
| Percentage of Public Schools | 56.3 |
| " " Private " | 25.5 |
| " " Endowed " | 18.1 |
| Candidates from Public Schools | 193 |
| " " Private " | 127 |
| " " Endowed " | 132 |
| | 452 |
| Percentage of Candidates from Public Schools | 42.6 |
| " " " " Private " | 28.0 |
| " " " " Endowed " | 29.1 |

## Classification of Candidates for the Degree of S.B., Admitted in 1908

| | |
|---|---|
| Number of Public Schools | 19 |
| " " Private " | 6 |
| " " Endowed " | 10 |
| | 35 |
| Percentage of Public Schools | 54.2 |
| " " Private " | 17.1 |
| " " Endowed " | 28.5 |
| Candidates from Public Schools | 47 |
| " " Private " | 14 |
| " " Endowed " | 16 |
| | 77 |
| Percentage of Candidates from Public Schools | 61.0 |
| " " " " Private " | 18.1 |
| " " " " Endowed " | 20.7 |

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## Classification of Men Refused Admission in 1908

| | A.B. | S.B. |
|---|---|---|
| Number of Public Schools | 22 | 12 |
| " " Private " | 13 | 5 |
| " " Endowed " | 7 | 4 |
| | 42 | 21 |
| Percentage of Public Schools | 52.3 | 57.1 |
| " " Private " | 30.9 | 23.8 |
| " " Endowed " | 16.6 | 19.0 |
| Candidates from Public Schools | 24 | 18 |
| " " Private " | 24 | 14 |
| " " Endowed " | 10 | 6 |
| | 58 | 38 |
| Percentage of Candidates from Public Schools | 41.3 | 47.3 |
| " " " " Private " | 41.3 | 36.8 |
| " " " " Endowed " | 17.2 | 15.7 |

## Choices of Subjects of Men Admitted in 1907 and 1908

| Subject. | 1907. | 1908. | Subject. | 1907. | 1908. |
|---|---|---|---|---|---|
| *Elementary* | | | Projection Drawing | 27 | 27 |
| English | 519 | 481 | Blacksmithing | 12 | 17 |
| Greek | 311 | 274 | Chipping | 11 | 19 |
| Latin | 549 | 483 | Machine Work | 10 | 19 |
| German | 351 | 341 | Woodworking | 18 | 22 |
| French | 514 | 448 | | | |
| History | 581 | 525 | *Advanced* | | |
| Algebra | 593 | 525 | Greek | 214 | 175 |
| Plane Geometry | 525 | 455 | Latin | 416 | 379 |
| Geometry | 58 | 72 | German | 244 | 224 |
| Physics | 460 | 405 | French | 390 | 311 |
| Chemistry | 245 | 191 | History | 120 | 95 |
| Physiography | 19 | 20 | Algebra | 86 | 60 |
| Anatomy | 9 | 10 | Solid Geometry | 136 | 151 |
| Harmony | 12 | 22 | Logarithms | 136 | 150 |
| Geography | 5 | 6 | Astronomy | 5 | 7 |
| Botany | 8 | 6 | Meteorology | 19 | 16 |
| Zoölogy | 10 | 19 | Physics | 1 | 2 |
| Civil Government | 25 | 21 | Counterpoint | 3 | 3 |
| Economics | 15 | 10 | Architect. Drawing | 1 | 0 |
| Freehand Drawing | 18 | 17 | English A | 197 | 147 |

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## Percentages of Failure in the Subjects in which Admission Examinations were Held

| | Preliminary Candidates. June and September. | All Candidates. June. | All Candidates. September. |
|---|---|---|---|
| *Elementary* | | | |
| English | 54.6 | 42.0 | 51.3 |
| Greek | 3.3 | 11.4 | 13.7 |
| Latin | 23.5 | 30.7 | 63.5 |
| German | 38.2 | 39.8 | 70.9 |
| French | 31.3 | 43.0 | 39.2 |
| History | 15.7 | 23.0 | 43.2 |
| Algebra | 15.1 | 20.8 | 32.3 |
| Plane Geometry | 18.5 | 24.5 | 30.0 |
| Geometry | 52 9 | 30.6 | 20.0 |
| Physics | 16.8 | 19.3 | 39.6 |
| Chemistry | 23.0 | 19.7 | 26.3 |
| Geography | 100.0 | 100.0 | 100.0 |
| Physiography | 69.1 | 71.4 | 100.0 |
| Anatomy | 15.3 | 13.6 | 0.0 |
| Harmony | 40.0 | 23.5 | 28.5 |
| Botany | 0.0 | 0.0 | 0.0 |
| Zoölogy | 0.0 | 0.0 | 0.0 |
| Civil Government | 83.3 | 69.2 | 76.9 |
| Economics | 0.0 | 50.0 | 66.6 |
| Freehand Drawing | 50.0 | 44.0 | 77.7 |
| Projection Drawing | 30.4 | 36.7 | 58.3 |
| Blacksmithing | 21.0 | 29.7 | 0.0 |
| Chipping | 14.2 | 18.1 | 50.0 |
| Machine Work | 33.3 | 30.7 | 0.0 |
| Woodworking | 14.2 | 11.9 | 0.0 |
| *Advanced* | | | |
| English A | 78.5 | 61.3 | 56.6 |
| Greek | 44.4 | 12.9 | 30.7 |
| Latin | 47.2 | 29.4 | 78.4 |
| German | 43.6 | 37.5 | 59.2 |
| French | 29.1 | 40.5 | 44.8 |
| History | 48.0 | 49.1 | 68.2 |
| Algebra | 25.0 | 39.3 | 29.1 |
| Solid Geometry | 52.9 | 40.8 | 51.8 |
| Logarithms | 37.5 | 41.9 | 50.9 |
| Astronomy | 0.0 | 12.5 | 0.0 |
| Meteorology | 0.0 | 37.5 | 75.0 |
| Counterpoint | 0.0 | 50.0 | 0.0 |
| Architectural Drawing | 0.0 | 0.0 | 0.0 |

Respectfully yours,

J. G. HART,
*Chairman of the Committee on Admission.*

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## PRESIDENTS OF UNIVERSITIES, COLLEGES, AND TECHNOLOGICAL SCHOOLS HOLDING DEGREES IN HARVARD UNIVERSITY

ARIZONA. Tucson, University of Arizona, President:
Kendric Charles Babcock, Litt. B. (*Univ. of Minnesota*) 1889, A.M. (*Harvard*) 1895, Ph.D. (*ibid.*) 1896.

COLORADO. Golden, Colorado School of Mines, President:
Victor Clifton Alderson, A.B. (*Harvard*) 1885, S.D. (*Armour Inst. of Tech.*) 1903, S.D. Hon. (*Beloit*) 1903.

DISTRICT OF COLUMBIA. Washington, American University, President:
Franklin Elmer Ellsworth Hamilton, A.B. (*Harvard*) 1887, S.T.B. (*Boston Univ.*) 1892, Ph.D. (*ibid.*) 1899, LL.D. (*Washington Univ., St. Louis*) 1904.

FLORIDA. De Land, John B. Stetson University, President:
Lincoln Hulley, A.B. (*Bucknell Univ.*) 1888, A.B. (*Harvard*) 1889, A.M. (*Bucknell Univ.*) 1895, Ph.D. (*Univ. of Chicago*) 1895, Litt.D. (*Stetson Univ.*) 1907.

FLORIDA. Gainesville, University of Florida, President:
Andrew Sledd, A.M. (*Randolph-Macon Coll.*) 1894, A.M. (*Harvard*) 1896, Ph.D. (*Yale*) 1903, LL.D. (*Univ. of South Carolina*) 1903.

ILLINOIS. Lebanon, McKendree College, President:
McKendree Hypes Chamberlin, A.B. (*McKendree Coll.*) 1859, LL.B. (*Harvard*) 1861.

ILLINOIS. Lincoln, Lincoln College, President:
James Henry McMurray, A.B. (*Oberlin*) 1897, A.M. (*Harvard*) 1901.

INDIANA. Goshen, Goshen College, President:
Noah Ebersole Byers, S.B. (*Northwestern Univ.*) 1898, A.M. (*Harvard*) 1903.

INDIANA. Indianapolis, Butler College, President:
Thomas Carr Howe, Ph.B. (*Butler Coll.*) 1889, A.M. (*ibid.*) 1893, A.M. (*Harvard*) 1897, Ph.D. (*ibid.*) 1899.

MAINE. Brunswick, Bowdoin College, President:
William De Witt Hyde, A.B. (*Harvard*) 1879, (*Andover Theol. Sem.*) 1882, S.T.D. (*Harvard*) 1886, LL.D. (*Syracuse*) 1897.

MASSACHUSETTS. Cambridge, Harvard University, President:
Charles William Eliot, A.B. (*Harvard*) 1853, A.M. (*ibid.*) 1856, LL.D. (*Williams*) 1869, LL.D. (*Coll. of New Jersey*) 1869, LL.D. (*Yale*) 1870, LL.D. (*Johns Hopkins*) 1902.

MASSACHUSETTS. Cambridge, Radcliffe College, President:
Le Baron Russell Briggs, A.B. (*Harvard*) 1875, A.M. (*ibid.*) 1882, LL.D. (*ibid.*) 1900, LL.D. (*Western Reserve Univ.*) 1906, Litt.D. (*Lafayette Coll.*) 1907.

MASSACHUSETTS. Worcester, Clark University, President:
Granville Stanley Hall, A.B. (*Williams*) 1867, A.M. (*ibid.*) 1871, (*Union Theol. Sem., N.Y.*) 1871, Ph.D. (*Harvard*) 1878, LL.D. (*Univ. of Michigan*) 1887, LL.D. (*Williams*) 1888, LL.D. (*Johns Hopkins*) 1902.

MINNESOTA. St. Paul, Hamline University, President:
George Herbert Bridgman, A.B. (*Dartmouth*) 1876, M.D. (*Harvard*) 1881.

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MISSOURI. St. Louis, Washington University, Chancellor:
David Franklin Houston, A.B. (*Univ. of South Carolina*) 1887, A.M. (*Harvard*) 1892, LL.D. (*Tulane Univ.*) 1903, LL.D. (*Univ. of Wisconsin*) 1906.

MONTANA. Missoula, University of Montana, President:
Clyde Augustus Duniway, A.B. (*Cornell*) 1892, A.M. (*Harvard*) 1894, Ph.D. (*ibid.*) 1897.

NEW YORK. Brooklyn, Institute of Arts and Sciences, Director:
Franklin William Hooper, A.B. (*Harvard*) 1875, A.M. Hon. (*ibid.*) 1897.

NEW YORK. Brooklyn, Polytechnic Institute, President:
Fred Washington Atkinson, A.B. (*Harvard*) 1890, Ph.D. (*Leipsic*) 1893.

NORTH CAROLINA. Elon College, Elon College, President:
Emmett Leonidas Moffitt, A.B. (*Trinity Coll., N. C.*) 1889, A.M. (*ibid.*) 1891, A.M. (*Harvard*) 1893.

OHIO. Cleveland, Adelbert College, Western Reserve University, President:
Charles Franklin Thwing, A.B. (*Harvard*) 1876, (*Andover Theol. Sem.*) 1879, S.T.D. (*Chicago Theol. Sem.*) 1888, LL.D. (*Marietta*) 1894, LL.D. (*Illinois Coll.*) 1894, LL.D. (*Washington and Jefferson Coll., Pa.*) 1902, LL.D. (*Waynesburg Coll., Pa.*) 1903.

OHIO. Oberlin, Oberlin College, President:
Henry Churchill King, A.B. (*Oberlin*) 1879, S.T.B. (*ibid.*) 1882, A.M. (*Harvard*) 1883, S.T.D. (*Oberlin*) 1897, S.T.D. (*Western Reserve Univ.*) 1901, S.T.D. (*Yale*) 1904.

OREGON. Albany, Albany College, President:
Charles Melvis Crooks, A.B. (*Ohio State Univ.*) 1892, S.T.B. (*Harvard*) 1896.

OREGON. Eugene, University of Oregon, President:
Prince Lucian Campbell, A.B. (*Christian Coll., Monmouth, Ore.*) 1879, A.B. (*Harvard*) 1886.

PENNSYLVANIA. Beaver Falls, Geneva College, President:
William Henry George, A.B. (*Geneva Coll.*) 1900, A.B. (*Harvard*) 1902, A.M. (*Princeton*) 1906.

PENNSYLVANIA. Haverford, Haverford College, President:
Isaac Sharpless, S.B. (*Harvard*) 1873, S.D. Hon. (*Univ. of Pennsylvania*) 1883, LL.D. (*Swarthmore*) 1889, L.H.D. (*Hobart, N.Y.*) 1903.

TEXAS. Austin, University of Texas, President:
Sidney Edward Mezes, S.B. (*Univ. of California*) 1884, A.B. (*Harvard*) 1890, A.M. (*ibid.*) 1891, Ph.D. (*ibid.*) 1893.

UTAH. Logan, Utah Agricultural College, President:
John Andreas Widtsoe, S.B. (*Harvard*) 1894, Ph.D. (*Göttingen*) 1899.

WASHINGTON. Pullman, Washington State Agricultural College, President:
Enoch Albert Bryan, A.B. (*Indiana Univ.*) 1878, A.M. (*ibid.*) 1884, A.M. (*Harvard*) 1893.

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HAWAII. Honolulu, Oahu College, President:
Arthur Floyd Griffiths, Ph.B. (*St. Lawrence, N.Y.*) 1897, A.M. (*ibid.*) 1899, A.B. (*Harvard*) 1899.

PHILIPPINE ISLANDS. Manila, Liceo College de Manila, School of Engineering and Architecture, Director:
José Petronio Katigbak, S.B. (*Harvard*) 1904.

CANADA. New Brunswick, Fredericton, University of New Brunswick, Chancellor:
Cecil Charles Jones, A.B. (*Univ. of New Brunswick*) 1897, A.B. (*Harvard*) 1898, Ph.D. Hon. (*Univ. of New Brunswick*) 1902.

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## PLAN FOR THE REMOVAL OF ANDOVER THEOLOGICAL SEMINARY TO CAMBRIDGE AND AFFILIATION WITH HARVARD UNIVERSITY

### I. Autonomy and Independence

1. The organization of the Seminary shall be maintained without changes, all its trusts being executed as at present.

2. The Faculty shall be appointed as hitherto by the Trustees, and confirmed, when so required by the trusts, by the Board of Visitors; and shall maintain a distinct organization for the conduct of the affairs of the Seminary for which they are responsible.

3. The requirements for the Andover degree of Bachelor of Divinity shall be determined by the Faculty of the Seminary, subject to the approval of the Trustees; and recommendations to the Trustees for the Andover degree of Bachelor of Divinity shall proceed from the Andover Faculty.

4. A separate catalogue or announcement shall be published by the Seminary.

5. Land shall be bought in Cambridge conveniently near the Harvard Divinity School, adequate to the present needs and probable development of the Seminary.

6. A scheme of building shall be laid out suitable and sufficient for the various uses of the Seminary. As a part of this scheme a building shall be at once erected containing provision for the library, lecture, and social rooms, and similar accommodation.

### II. Affiliation with Harvard University

1. In general the two institutions enter into mutual agreement to avoid all rivalry, competition, and needless duplication of courses; and to combine the resources of instruction in both institutions in an economical, harmonious, and comprehensive scheme of theological education.

2. The Theological Faculties of the two institutions shall arrange for some systematic method of mutual conference, to suggest, plan, and coördinate courses of instruction with a view to the harmonious enlargement of the opportunities for theological study given in the two institutions.

3. Courses given by teachers in Harvard University shall, if approved for that purpose by the Andover authorities, be accepted for the Andover degree of Bachelor of Divinity, and courses given by teachers in Andover Seminary shall, if approved for that purpose by the Harvard authorities, be accepted for the Harvard degree of Bachelor of Divinity.

For courses of one institution taken by students of the other fees shall be charged on the scale established in Harvard University, and each institution shall pay the other the fees it receives from its students for courses taken by them in the other institution. In order that students primarily registered in Andover Seminary may take courses given by teachers in Harvard University, they shall register in the University.

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4. Professors in Andover Seminary whose courses are accepted for the Harvard Degree of Bachelor of Divinity will receive appointment as Andover Professors in Harvard University, and their courses will be accepted for any Harvard degree for which they are approved by the Harvard authorities; but this office and title will not carry any stipend from the University, nor give a seat in any University faculty.

5. Students in Andover Seminary, recommended for its degree of B.D., may at the same time, and without additional work, also obtain from Harvard University the degree of B.D. on recommendation of the Harvard Divinity Faculty. Such students must have been registered for one year in Harvard Divinity School, and have completed under Harvard teachers not less than five courses approved by the Harvard Divinity Faculty, including the equivalent of at least three full Divinity School courses.

Students in Andover Seminary may obtain the degree of A.M. or Ph.D. from Harvard University on recommendation of the Faculty of Arts and Sciences under the same conditions as are required of students in Harvard Divinity School, provided such students are also registered for one year in Harvard University.

The Harvard statutory requirement for every degree, of "residence at the University of at least one year," can be fulfilled while the student is also at the same time in residence in Andover Seminary. But no course of instruction can be counted for the degree of B.D. and again for the degree of A.M. or Ph.D. from Harvard University.

6. Both institutions will endeavor to make and keep the standards of admission and graduation, scholarship aid, fees, and general charges equal in the two schools, as far as practicable.

7. The Officers and students of Harvard University and of Andover Seminary shall have the use and enjoyment on equal terms of libraries, museums, and similar privileges, maintained or offered by either institution.

8. The catalogue or announcement published by Andover Seminary shall contain some statement of the relation between the Seminary and the University, of the resources, courses of instruction, etc., offered by the two institutions, and of the students not registered as Andover students who receive instruction from professors in Andover Seminary, and a similar statement with reference to Andover shall be made in the Harvard Catalogue.

9. Arrangements shall be made, if possible and necessary, with Harvard University for the use of rooms in the Divinity or other dormitory, and of lecture rooms and libraries, until the Trustees are able to provide such facilities in the Seminary building.

10. Any arrangement with Harvard University under this plan shall be terminable by either party with two years' notice.

11. It is the purpose of the Trustees to carry into effect the removal to Cambridge and affiliation with Harvard in the Fall of 1908.

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*LAW SCHOOL*

ANNUAL EXAMINATIONS, JUNE, 190

Record of

NOTE: — *P* = passed. *F* = failed. (Passing mark, 55 per cent.)
*A* = Average of 75 per cent. or upwards (Honor mark).
*B* = " " 70 " " but less than 75 per cent.
*C* = " " 60 " " " " " " 70 " "
*D* = " " 55 " " " " " " 60 " "

| FIRST YEAR. | | SECOND YEAR. | | THIRD YEAR. | |
|---|---|---|---|---|---|
| Contracts | | Admiralty | | Conflict of Laws | |
| Criminal Law | | Agency | | Constitutional Law | |
| Property | | Bankruptcy | | Corporations | |
| Torts | | Bills and Notes | | Equity Jurisdiction | |
| Civil Procedure | | Carriers | | Insurance | |
| | | Contracts II | | International Law | |
| | | Damages | | Partnership | |
| | | Equity Procedure | | Property | |
| | | Evidence | | Roman Law | |
| | | Interpretation of Statutes | | Suretyship & Mortgage | |
| | | Law of Persons | | Comp. Jurisprudence | |
| | | Property | | | |
| | | Quasi-Contracts | | | |
| | | Sales | | | |
| | | Trusts | | | |
| First Year Average | | Second Year Average | | Third Year Average | |

General Average.

JAMES BARR AMES, *Dean.*

## RULES OF THE CARNEGIE FOUNDATION

The rules governing the payment of retiring allowances by the Carnegie Foundation for the Advancement of Teaching were adopted by the Trustees April 9, 1906, and amended November 21, 1906, and November 20, 1907. By vote of the Executive Committee of the Foundation on June 7, 1906, Harvard University was placed upon the list of institutions accepted as eligible for the benefits of the Foundation. On October 8, 1906, the President and Fellows voted to accept these benefits for Harvard University. The following rules are now in force: —

1. A normal retiring allowance is considered to be one awarded to a professor in an accepted university, college or technical school, on the ground of either age or length of service. The term professor, as here used, is understood to include Presidents, Deans, Professors, Associate Professors, and Assistant Professors, in institutions of higher learning.

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2. Retiring allowances shall be granted under the following rules, upon the application of the institution with which the professor is connected, and in the application it should be clearly set forth whether the retiring allowance is recommended on the ground of age or service.

3. In reckoning the amount of the retiring allowance the average salary for the last five years of active service shall be considered the active pay.

4. Any person sixty-five years of age, and who has had not less than fifteen years of service as a professor, and who is at the time a professor in an accepted institution, shall be entitled to an annual retiring allowance computed as follows:—

(*a*) For an active pay of twelve hundred dollars or less, an allowance of one thousand dollars, provided no retiring allowance shall exceed ninety per cent of the active pay.

(*b*) For an active pay greater than twelve hundred dollars, the retiring allowance shall equal one thousand dollars, increased by fifty dollars for each one hundred dollars of active pay in excess of twelve hundred dollars.

(*c*) No retiring allowance shall exceed four thousand dollars.

5. Any person who has had a service of twenty-five years as a professor, and who is at the time a professor in an accepted institution, shall be entitled to a retiring allowance computed as follows: —

(*a*) For an active pay of twelve hundred dollars or less, a retiring allowance of eight hundred dollars, provided that no retiring allowance shall exceed eighty per cent of the active pay.

(*b*) For an active pay greater than twelve hundred dollars, the retiring allowance shall equal eight hundred dollars, increased by forty dollars for each one hundred dollars of active pay in excess of twelve hundred dollars.

(*c*) For each additional year of service above twenty-five, the retiring allowance shall be increased by one per cent of the active pay.

(*d*) No retiring allowance shall exceed four thousand dollars.

6. Any person who has been for ten years the wife of a professor in actual service may receive during her widowhood one-half of the allowance to which her husband would have been entitled.

7. In the preceding rules, years of leave of absence are to be counted as years of service, but not exceeding one year in seven. Librarians, registrars, recorders, and administrative officers of long tenure, whose salaries may be classed with those of professors and assistant professors, are considered eligible to the benefits of a retiring allowance.

8. Teachers in the professional departments of universities whose principal work is outside the profession of teaching are not included.

9. The benefits of the Foundation shall not be available to those whose active service ceased before April 16, 1905, the date of Mr. Carnegie's original letter to the Trustees.

10. The Carnegie Foundation for the Advancement of Teaching retains the power to alter these rules in such manner as experience may indicate as desirable for the benefit of the whole body of teachers.

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## Relation of the Rules of the Carnegie Foundation to the Rules of the University

By vote of the President and Fellows, October 28, 1907, the relation of the rules of the Carnegie Foundation to those of Harvard University was defined, substantially as follows: —

The effect of the provisions of the Carnegie Foundation will be to contribute toward the support of the system of retiring allowances previously established by Harvard University. In all cases the retiring allowance, whether supported by the University or by the Carnegie Foundation, or by both, will be paid by vote of the President and Fellows, based upon the most favorable computation; that is to say, if the rights of an officer are larger under the Harvard rules than under the Carnegie Foundation rules, the retiring allowance will be computed in accordance with the former. If, on the other hand, the rights of an officer are smaller under the Harvard rules than under the Carnegie Foundation rules, the latter will prevail. But the obligation of the University to pay any retiring allowance out of its own funds will not exceed the amount determined by the Rules of the University.

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## TABLE I.

### Illness Report, 1907–08.

| Diseases. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May. | June. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Appendicitis | 1 | 4 | 5 | 7 | 8 | 5 | 6 | 7 | 1 | 0 | 44 |
| Asthma | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 |
| Bronchitis | .. | 8 | 17 | 4 | 5 | 9 | 9 | 8 | 4 | .. | 64 |
| Chicken-pox | .. | .. | .. | .. | 1 | 3 | 1 | 1 | .. | .. | 6 |
| Colds — unclassified | .. | 12 | 34 | 26 | 11 | 14 | 32 | 20 | 17 | 1 | 167 |
| Coryza | .. | 2 | 3 | 2 | 1 | 1 | 3 | 2 | .. | .. | 14 |
| Diarrhoea | .. | 1 | 2 | 3 | .. | 1 | 1 | 2 | 1 | .. | 11 |
| Diphtheria | .. | .. | .. | 3 | .. | 1 | 1 | .. | .. | .. | 5 |
| Ear, of the | 1 | .. | 5 | 6 | 1 | 5 | 5 | 3 | 2 | .. | 28 |
| Eye, of the | .. | 3 | 11 | 14 | 9 | 16 | 20 | 12 | 21 | .. | 106 |
| General Debility | .. | 3 | 23 | 16 | 11 | 26 | 26 | 9 | 9 | .. | 123 |
| Headache | .. | .. | .. | .. | 2 | 1 | 6 | 1 | 1 | .. | 11 |
| Heart, of the | .. | 1 | 3 | 1 | 1 | 3 | 1 | 2 | .. | .. | 12 |
| Indigestion | 6 | 13 | 15 | 11 | 4 | 13 | 14 | 12 | 6 | 1 | 95 |
| Insomnia | .. | .. | .. | 2 | .. | 2 | 3 | 1 | 2 | 1 | 11 |
| Jaundice | 1 | 3 | 1 | 2 | 1 | 2 | 2 | 5 | 2 | .. | 19 |
| La Grippe | 2 | 5 | 86 | 183 | 53 | 24 | 44 | 37 | 5 | 2 | 441 |
| Laryngitis | .. | 1 | 6 | 2 | 5 | 6 | 2 | .. | .. | .. | 22 |
| Malaria | .. | .. | 1 | 1 | .. | .. | 2 | 1 | .. | 1 | 6 |
| Measles | .. | .. | .. | .. | 2 | 1 | 4 | 12 | 13 | 4 | 36 |
| Miscellaneous | 2 | 8 | 20 | 24 | 27 | 17 | 27 | 22 | 9 | 6 | 162 |
| Mumps | .. | 1 | .. | .. | 4 | 1 | 2 | 1 | .. | .. | 9 |
| Nephritis | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 2 |
| Neuralgia | .. | .. | 2 | .. | 2 | .. | 3 | 1 | 1 | 1 | 10 |
| Pharyngitis | .. | 2 | 8 | 6 | 9 | 4 | 6 | 79 | 2 | .. | 116 |
| Pleuritis | .. | .. | 1 | .. | .. | 1 | 1 | .. | 1 | .. | 4 |
| Pneumonia | .. | .. | 3 | 1 | 1 | 1 | .. | .. | .. | .. | 6 |
| Rheumatism | .. | 1 | 2 | 5 | 1 | 3 | 1 | 14 | 5 | .. | 32 |
| Scarlet Fever | .. | .. | .. | 1 | 2 | 1 | 2 | 39 | 1 | .. | 46 |
| Skin, of the | .. | .. | 7 | 3 | 1 | 4 | 7 | 5 | 4 | .. | 31 |
| Surgical | 6 | 39 | 57 | 24 | 33 | 26 | 40 | 39 | 20 | 4 | 288 |
| Teeth, of the | .. | 1 | 4 | 4 | 2 | 1 | 4 | 4 | 1 | 1 | 22 |
| Tonsilitis | 4 | 8 | 10 | 8 | 11 | 19 | 28 | 52 | 14 | 1 | 155 |
| Tuberculosis | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 2 |
| Typhoid | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | 3 |
| Totals | 23 | 118 | 328 | 360 | 209 | 211 | 305 | 392 | 142 | 23 | 2111 |
| Visits | 23 | 246 | 213 | 360 | 256 | 238 | 368 | 559 | 251 | 100 | 2614 |
| Office consultations, medical | 18 | 178 | 142 | 84 | 135 | 85 | 148 | 111 | 92 | 61 | 1054 |
| Office consultations, surgical | 2 | 66 | 197 | 286 | 108 | 94 | 115 | 385 | 227 | 68 | 1548 |
| Total number of consultations | 43 | 490 | 552 | 730 | 499 | 417 | 631 | 1055 | 570 | 229 | 5216 |

Cases not seen by the Medical Visitor . . . . . 841

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## TABLE II

### Illness Report as Related to the different Schools

| Diseases. | College. | | | | | Scientific. | | | | Law. | Graduate. | Divinity. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | Sp. | 1 | 2 | 3 | 4 | | | | |
| Appendicitis | 8 | 11 | 7 | 5 | 3 | .. | 1 | .. | .. | 4 | 5 | .. | 44 |
| Asthma | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Bronchitis | 26 | 17 | 6 | 4 | 5 | .. | 1 | 1 | 1 | 1 | 2 | .. | 64 |
| Chicken-pox | 4 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 6 |
| Colds, unclassified | 52 | 61 | 24 | 17 | 5 | 2 | 1 | .. | 1 | 3 | .. | 1 | 167 |
| Coryza | 5 | 7 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14 |
| Diarrhoea | 5 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 11 |
| Diphtheria | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 2 | 1 | .. | 5 |
| Ear, of the | 13 | 6 | 3 | .. | .. | 1 | .. | .. | .. | 4 | 1 | .. | 28 |
| Eye, of the | 43 | 35 | 14 | 6 | 8 | .. | .. | .. | .. | .. | .. | .. | 106 |
| General Debility | 34 | 36 | 26 | 15 | 9 | .. | .. | 1 | .. | 1 | 1 | .. | 123 |
| Headache | 5 | 4 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 11 |
| Heart, of the | 2 | 5 | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | .. | 12 |
| Indigestion | 29 | 30 | 20 | 5 | 4 | .. | .. | 3 | .. | 3 | 1 | .. | 95 |
| Insomnia | 1 | 5 | 1 | 1 | 1 | .. | .. | 1 | .. | 1 | .. | .. | 11 |
| Jaundice | 5 | 7 | 3 | 1 | .. | .. | .. | .. | .. | 2 | 1 | .. | 19 |
| La Grippe | 117 | 123 | 82 | 40 | 27 | 1 | 1 | 4 | 2 | 26 | 18 | .. | 441 |
| Laryngitis | 6 | 6 | 5 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 22 |
| Malaria | 2 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 6 |
| Measles | 11 | 8 | 4 | 3 | 2 | .. | .. | .. | .. | 6 | 2 | .. | 36 |
| Miscellaneous | 46 | 50 | 22 | 12 | 9 | 3 | 1 | .. | .. | 13 | 4 | 2 | 162 |
| Mumps | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 9 |
| Nephritis | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 |
| Neuralgia | 4 | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 10 |
| Pharyngitis | 35 | 25 | 19 | 10 | 7 | .. | .. | .. | .. | 11 | 8 | 1 | 116 |
| Pleuritis | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 4 |
| Pneumonia | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 6 |
| Rheumatism | 4 | 7 | 7 | 6 | 2 | .. | .. | 1 | .. | 2 | 3 | .. | 32 |
| Scarlet Fever | 18 | 15 | 2 | 4 | .. | 1 | .. | .. | .. | 4 | 2 | .. | 46 |
| Skin, of the | 9 | 14 | 6 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 31 |
| Surgical | 75 | 89 | 38 | 44 | 12 | .. | .. | .. | 2 | 20 | 8 | .. | 288 |
| Teeth, of the | 11 | 4 | 5 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 22 |
| Tonsilitis | 40 | 37 | 29 | 15 | 3 | 1 | 1 | .. | .. | 21 | 8 | .. | 155 |
| Tuberculosis | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 |
| Typhoid | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 3 |
| Totals | 619 | 613 | 337 | 197 | 104 | 10 | 7 | 11 | 7 | 130 | 72 | 4 | 2111 |
| No. of Students | 607 | 679 | 467 | 293 | 231 | 22 | 25 | 23 | 26 | 716 | 463 | 31 | |
| % of "Sign-offs" | 102 | 90 | 72 | 67 | 45 | 45 | 28 | 47 | 26 | 18 | 15 | 12 | |
| No. of Students cared for at Infirmary | 96 | 105 | 69 | 58 | 30 | 5 | 1 | .. | 1 | 103 | 63 | 2 | |
| % of "Sign-offs" | 14 | 15 | 15 | 19 | 13 | 23 | 4 | .. | 4 | 14 | 14 | 6 | |
| Instructors cared for at Infirmary | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 |

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## TABLE III

## STILLMAN INFIRMARY

### List of Cases, 1907–08

| | | | |
|---|---|---|---|
| Abscess peritonsillar | 4 | Mumps | 5 |
| " miscellaneous | 13 | Otitis Media | 7 |
| Appendicitis | 27 | Pharyngitis | 14 |
| Bronchitis | 12 | Pleuritis | 1 |
| Colds — unclassified | 17 | Pneumonia | 4 |
| Concussion — cerebral | 7 | Rheumatism | 10 |
| Diphtheria | 5 | Scarlet Fever | 33 |
| Dislocations | 2 | Sepsis | 19 |
| Fractures | 3 | Synovitis of knee | 9 |
| Gastro enteritis | 2 | Tonsilitis | 54 |
| Jaundice | 6 | Tuberculosis — pulmonary | 3 |
| La Grippe | 150 | Typhoid Fever | 2 |
| Laryngitis | 5 | No diagnosis | 8 |
| Measles | 27 | | |
| Miscellaneous Medical | 38 | Total | 541 |
| " Surgical | 54 | | |

| | |
|---|---|
| Room patients | 83 |
| Ward patients | 458 |
| Total | 541 |

| | |
|---|---|
| Discharged — well | 387 |
| " relieved | 151 |
| " not relieved | 2 |
| Died | 1 |
| Total | 541 |

| | |
|---|---|
| Total number of hospital days | 4,228 |
| Daily average | 15.35 |

| | |
|---|---|
| Total number of operations | 54 |
| Operations for Appendicitis | 16 |

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## REPORT OF THE SECRETARY FOR APPOINTMENTS

To the President of the University: —

Sir, — I have the honor of presenting a report of the work of the Appointments Office for the year ending September 30, 1908.

The total number of men registered with the Office on September 30, 1908, was 4,389 as against 3,993 at the same date in 1907, — an increase of 396. Of this number 1,193 men are registered in the Alumni Office in Boston as candidates for business positions. During the year 1907–08, as formerly, the demand on the University for teachers has exceeded that for men to fill business or technical positions.

The following table shows, as reported to the Office, the number of calls for teachers from schools, colleges, or universities, and for men to take positions in business houses: —

| | | |
|---|---|---|
| Calls for Teachers: — | | |
| Direct, from Schools, Colleges, and Universities | 608 | |
| Indirect, through Teachers' Agencies | 160 | 768 |
| Calls from Business Houses: — | | |
| Direct | 124 | |
| Indirect | 1 | 125 |
| Total Calls to fill Permanent Positions | | 893 |

The following tables show the number of permanent positions filled. The total is 612. It will be noticed that the positions filled in Harvard are separated from those in other institutions. With the positions filled in the University the Appointments Office has little to do, although occasionally a Department may enlist the services of the Office to find an assistant. It should be remembered that many of the permanent positions recorded below in other institutions are filled directly by some Department of the University without any assistance from the Appointments Office: —

### Permanent Teaching Positions

| | | |
|---|---|---|
| Universities or Colleges: — | | |
| Harvard University | 205 | |
| Other Universities and Colleges: — | | |
| Regular Teachers | 76 | |
| Substitute Teachers | 2 | 283 |
| Technical Schools: — | | |
| Harvard University | 108 | |
| Other Technical Schools | 8 | 116 |
| Normal Schools | | 3 |
| Public High Schools | | 11 |
| Private Schools, Endowed Schools, Academies, Seminaries | | 29 |
| Tutors or Companions (one year) | | 14 |
| Total | | 456 |



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### Administrative Positions (Educational)

| | |
|---|---|
| Chancellor of University | 1 |
| Superintendents of Schools | 2 |
| Head-masters or Principals | 6 |
| Total | 9 |

### College Positions (Not Teaching)

| | |
|---|---|
| Auditor, Randall Hall Association | 1 |
| Clerks for College Office | 2 |
| Proctors (College rooms) | 71 |
| Secretary | 1 |
| Assistant Secretary | 1 |
| Corrector | 1 |
| Total | 77 |

### Permanent Business Positions

| | | | |
|---|---|---|---|
| Art Company | 3 | Newspaper | 1 |
| Banking Houses | 6 | Publishing Houses | 3 |
| Brokerage Firms | 2 | Research or Statistical Work | 1 |
| Bureau of Corporations | 1 | Secretaries | 5 |
| Consular Service | 1 | Settlement Work | 1 |
| Government Service | 1 | Social Service Work | 1 |
| Librarian | 1 | Wholesale Dealer | 1 |
| Manufacturing Concerns | 12 | Total | 40 |

### Permanent Business Positions (Technical)

| | | |
|---|---|---|
| Chemists | | 5 |
| Engineers: | | |
| Electrical | 8 | |
| Mechanical | 11 | |
| Mining | 1 | 20 |
| Foresters | | 5 |
| Total | | 30 |

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The following table shows the number of temporary positions filled, — 1,600 in all: —

TEMPORARY WORK

| | | | |
|---|---|---|---|
| Advertising Agents | 3 | Outing Class Teachers | 7 |
| Athletic Coaches | 4 | Painters (House) | 2 |
| Attendants | 8 | Physician | 1 |
| Bell Boy — Club | 1 | Playgrounds | 5 |
| Boatman | 1 | Printers | 2 |
| Bookkeeper | 1 | Proctors | 51 |
| Canvassers | 5 | Proof-readers | 2 |
| Caretakers | 9 | Railroad | 1 |
| Carpenters | 3 | Readers | 15 |
| Chauffeur | 1 | Rooms for Services | 10 |
| Chemist | 1 | Scene Shifters, Chair Movers, etc. | 15 |
| Choremen | 55 | Secretaries | 3 |
| Clerks | 191 | Settlement Workers | 12 |
| Collectors | 6 | Snow Shovellers | 3 |
| Companions | 10 | Solicitors | 12 |
| Computers | 11 | Statisticians | 18 |
| Draughtsmen | 9 | Stenographers | 47 |
| Elevator Man | 1 | Store Clerks | 29 |
| Engineers | 17 | Substitutes for Schools | 10 |
| Farm Hands | 7 | Summer Camps (Councillors, Directors, Tutors) | 5 |
| Furnace Tenders | 3 | Summer School Teachers | 14 |
| Gardeners | 5 | Supervisors of Study | 38 |
| General Man on Summer Place | 1 | Surveyor | 1 |
| Guards | 10 | Ticket Takers | 464 |
| Guides | 48 | Timekeeper | 1 |
| Gymnastics | 2 | Translators | 12 |
| Hotel Help | 6 | Tutors and Companions (less than one year) | 32 |
| Janitor | 1 | Tutor for School | 1 |
| Laboratory Assistant | 1 | Tutors (Special Subjects) | 190 |
| Lecturer | 1 | Typewriters | 29 |
| Legal Assistant | 1 | Ushers | 6 |
| Lettering | 1 | Waiters | 8 |
| Library Work | 8 | Watchman | 1 |
| Literary Work | 2 | Watch Repairers | 2 |
| Messengers | 22 | Weighers | 2 |
| Meter Readers | 49 | Total | 1600 |
| Monitors | 28 | | |
| Museum Work | 2 | | |
| Musicians and Musical Directors | 7 | | |
| Newspaper Correspondents | 6 | | |
| Night School Teacher | 1 | | |

Total permanent and temporary positions . . . . . 2212

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The following table shows the demands on various Departments of the University for teachers in single subjects: —

| | | | |
|---|---|---|---|
| Sanskrit | 1 | Medicine | 11 |
| Semitic | 1 | Pediatrics | 6 |
| Greek | 2 | Orthopedics | 4 |
| Latin | 8 | Fine Arts | 2 |
| English | 42 | Architecture | 5 |
| Public Speaking | 4 | Drawing | 5 |
| French | 7 | Modelling | 1 |
| German | 14 | Music | 2 |
| History | 18 | Mathematics | 12 |
| Government | 9 | Bookkeeping | 1 |
| Economics | 21 | Astronomy | 3 |
| Law | 7 | Physics | 3 |
| Philosophy | 19 | Chemistry | 32 |
| Psychology | 4 | Engineering | 11 |
| Social Ethics | 3 | Applied Mechanics | 1 |
| Education | 2 | Forestry | 1 |
| Botany | 10 | Surgery | 13 |
| Zoölogy | 10 | Obstetrics | 3 |
| Economic Entomology | 2 | Gynaecology | 3 |
| Biology | 2 | Dermatology | 3 |
| Geology | 4 | Syphilis | 1 |
| Physiography | 3 | Neurology | 1 |
| Meteorology | 1 | Neuropathology | 1 |
| Anthropology | 2 | Ophthalmology | 5 |
| Anatomy | 8 | Otology | 5 |
| Physiology | 8 | Laryngology | 7 |
| Bacteriology | 7 | Theory and Practice of Physic | 11 |
| Histology | 1 | Mental Diseases | 1 |
| Pathology | 8 | Total | 383 |
| Hygiene | 1 | | |

The following table shows the number of men supplied to teach more than one subject, or to combine teaching with other work: —

| | | | |
|---|---|---|---|
| Latin and Greek | 4 | Physics and Chemistry | 1 |
| Latin and German | 1 | Physics, Chemistry, Botany, and Physiography | 1 |
| Latin, Greek, German, and History | 1 | Physics, Chemistry, Physiography, and Athletics | 1 |
| Latin and History | 1 | Shopwork | 2 |
| English Instructor and Y. M. C. A. Secretary | 1 | Mining and Metallurgy | 4 |
| English and Mathematics | 2 | Mineralogy and Petrography | 1 |
| French and German | 1 | Science | 1 |
| Romance Languages | 16 | Pathology and Neuropathology | 1 |
| German, English, and History | 1 | Anatomy and Otology | 1 |
| History, Government, and Economics | 1 | Biology and Geology | 1 |
| History and Economics | 3 | Obstetrics and Gynaecology | 2 |
| Economics and Politics | 1 | Histology and Embryology | 2 |
| Mathematics Instructor, Director of Dining Hall, and Proctor | 1 | Psychology and Hygiene | 1 |
| Mathematics and Science | 2 | General Teachers | 3 |
| Architecture and Civil Engineering | 1 | Total | 59 |

The table on page 359 sets forth the geographical distribution of the permanent teaching, educational, and business positions filled.

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GEOGRAPHICAL DISTRIBUTION

| | Universities or Colleges. | Technical Schools. | Normal Schools. | Public Schools. | Priv. Schs., Endow. Schs., Academies, Seminaries. | Tutors or Companions, 1 yr. | Chancellor. | Superintendents. | Head-masters or Principals. | Proctors (College Rooms). | Business. | Business — Technical. | Totals for States. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH ATLANTIC DIVISION: | | | | | | | | | | | | | |
| Maine | 3 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | 7 |
| New Hampshire | 4 | 1 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 7 |
| Vermont | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Massachusetts | 210 | 111 | 1 | 4 | 13 | 5 | .. | .. | 3 | 71 | 34 | 15 | 467 |
| Rhode Island | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 |
| Connecticut | 3 | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 6 |
| New York | 8 | 1 | 1 | 2 | 2 | 2 | .. | .. | 1 | .. | 4 | .. | 21 |
| New Jersey | 1 | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | 1 | 5 |
| Pennsylvania | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 4 |
| SOUTH ATLANTIC DIVISION: | | | | | | | | | | | | | |
| District of Columbia | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 4 | 9 |
| Virginia | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| North Carolina | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| South Carolina | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| SOUTH CENTRAL DIVISION: | | | | | | | | | | | | | |
| Alabama | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 |
| Mississippi | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Louisiana | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Texas | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Oklahoma | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| NORTH CENTRAL DIVISION: | | | | | | | | | | | | | |
| Ohio | 4 | .. | .. | .. | 2 | .. | .. | .. | 1 | .. | .. | .. | 7 |
| Indiana | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 3 |
| Illinois | 9 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 1 | .. | 12 |
| Michigan | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 |
| Wisconsin | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 5 |
| Iowa | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| Missouri | 3 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 4 |
| South Dakota | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 |
| WESTERN DIVISION: | | | | | | | | | | | | | |
| Montana | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Wyoming | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Colorado | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Arizona | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 2 |
| Utah | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Washington | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 |
| California | 6 | .. | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | 10 |
| PHILIPPINES | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 |
| CANADA | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 3 |
| HAWAII | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| EUROPE (or general travel) | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| AUSTRIA | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| JAPAN | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 |
| Total positions | 283 | 116 | 3 | 11 | 29 | 14 | 1 | 2 | 6 | 71 | 46 | 30 | 612 |

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The salaries of 577 out of the 612 permanent positions filled amount to $419,014.34; divided as follows: —

| | Salaries. | Number of Positions. |
|---|---|---|
| Universities, Colleges, Technical and Normal Schools | $260,500.00 | 383 |
| Secondary Schools | 59,250.00 | 48 |
| Tutoring | 29,810.00 | 14 |
| Business | 69,454.34 | 132 |
| Total | $419,014.34 | 577 |

No report has been received from 35 men.

The above tables show the number of positions filled by the Appointments Office in coöperation with the various Departments of the University or by the Departments themselves. The increase of 161 over last year shows a falling off of 361 from the year before, when the increase was 522 over the year 1905–06. This difference may be partly explained by the financial conditions during a large part of the year under review, which undoubtedly had a serious effect on the number of calls for business men and for tutors. Even if the gain over last year is not so great as might be wished, yet it is to be borne in mind, as has been before pointed out, that the Appointments Office is successful in recording only a part of the positions filled through the influence of the University. The Law and Medical Faculties keep no record of their achievements in this direction, and one Division of the University now prefers to make a separate report of the positions filled through its influence. Furthermore, the total of 1600 temporary positions filled does not by any means represent the actual number of jobs undertaken by students in the University. People in Cambridge and in Boston are constantly employing students, and no report ever comes to the Appointments Office. Then, too, many students may continue to fill throughout their University course positions secured through the Appointments Office in their first or second year of residence; the first job is reported, but no record of the subsequent work appears in the statistics of the Office. The number of mature, skilled men registering in the Office is steadily on the increase, and it is hoped that the friends of the University in this community may turn with greater frequency to the Office when they need the temporary assistance of trained, eager, and industrious workers. It is also to be hoped that business men throughout the country may find it convenient to notify the Alumni Office or the Appointments Office of vacancies in their respective undertakings.

E. H. WELLS,
*Secretary for Appointments.*

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# GEOGRAPHICAL DISTRIBUTION OF STUDENTS, 1900–09

| UNIVERSITY TOTAL | 1900 –01 | 1901 –02 | 1902 –03 | 1903 –04 | 1904 –05 | 1905 –06 | 1906 –07 | 1907 –08 | 1908 –09 |
|---|---|---|---|---|---|---|---|---|---|
| North Atlantic | 3419 | 3276 | 3332 | 3407 | 3235 | 3114 | 3165 | 3045 | 2931 |
| South Atlantic | 100 | 95 | 116 | 115 | 114 | 104 | 128 | 135 | 120 |
| South Central | 66 | 74 | 74 | 74 | 88 | 89 | 98 | 94 | 88 |
| North Central | 543 | 539 | 560 | 548 | 526 | 470 | 502 | 510 | 484 |
| Western | 96 | 100 | 129 | 129 | 126 | 119 | 116 | 132 | 140 |
| Foreign and Dependencies | 90 | 84 | 91 | 108 | 103 | 113 | 140 | 149 | 155 |
| Total | 4314 | 4168 | 4302 | 4381 | 4192 | 4009 | 4149 | 4065 | 3918 |
| New England | 2787 | 2618 | 2631 | 2676 | 2481 | 2390 | 2423 | 2319 | 2252 |
| Massachusetts | 2415 | 2244 | 2260 | 2289 | 2126 | 2037 | 2079 | 1992 | 1941 |
| N. Y., N. J., Pa. | 632 | 658 | 701 | 731 | 754 | 724 | 751 | 726 | 679 |
| South Atlantic and South Central | 166 | 169 | 190 | 189 | 202 | 193 | 226 | 229 | 208 |
| **HARVARD COLLEGE** | | | | | | | | | |
| North Atlantic | 1621 | 1585 | 1678 | 1659 | 1625 | 1560 | 1857 | 1852 | 1808 |
| South Atlantic | 40 | 47 | 58 | 52 | 50 | 41 | 58 | 64 | 54 |
| South Central | 30 | 35 | 38 | 34 | 33 | 26 | 29 | 25 | 32 |
| North Central | 238 | 252 | 264 | 256 | 225 | 189 | 213 | 207 | 220 |
| Western | 36 | 37 | 42 | 42 | 47 | 49 | 51 | 56 | 62 |
| Foreign and Dependencies | 27 | 27 | 29 | 30 | 29 | 34 | 60 | 73 | 67 |
| Total | 1992 | 1983 | 2109 | 2073 | 2009 | 1899 | 2268 | 2277 | 2238 |
| New England | 1235 | 1176 | 1240 | 1216 | 1162 | 1130 | 1359 | 1373 | 1372 |
| Massachusetts | 1113 | 1054 | 1118 | 1097 | 1052 | 1017 | 1230 | 1245 | 1245 |
| N. Y., N. J., Pa. | 386 | 409 | 438 | 443 | 463 | 430 | 498 | 479 | 431 |
| South Atlantic and South Central | 70 | 82 | 96 | 86 | 83 | 67 | 87 | 89 | 86 |

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## ORDINARY DEGREES CONFERRED, 1904–08

| | 1904 | 1905 | 1906 | 1907 | 1908 |
|---|---|---|---|---|---|
| Bachelors of Arts | 459 | 427 | 374 | 448 | 379 |
| Bachelors of Arts out of course | 88 | 44 | 52 | 63 | 60 |
| Bachelors of Science | 77 | 91 | 62 | 79 | 50 |
| Bachelors of Science out of course | 7 | 16 | 13 | 17 | 10 |
| Bachelors of Divinity | 7 | 7 | 6 | 7 | 12 |
| Bachelors of Divinity out of course | 1 | 0 | 0 | 0 | 0 |
| Bachelors of Laws | 169 | 170 | 178 | 183 | 159 |
| Bachelors of Laws out of course | 13 | 13 | 13 | 23 | 13 |
| Bachelors of Agricultural Science | 3 | 1 | 2 | 6 | 7 |
| Bachelors of Agricultural Science out of course | 0 | 0 | 0 | 2 | 0 |
| Doctors of Medicine | 131 | 82 | 80 | 70 | 69 |
| Doctors of Medicine out of course | 4 | 2 | 1 | 0 | 2 |
| Doctors of Dental Medicine | 25 | 32 | 34 | 24 | 18 |
| Masters of Arts | 157 | 131 | 110 | 124 | 116 |
| Masters of Arts out of course | 5 | 12 | 4 | 8 | 8 |
| Masters of Science | 2 | 4 | 3 | 2 | 4 |
| Masters of Science out of course | 0 | 1 | 0 | 0 | 0 |
| Doctors of Philosophy | 46 | 39 | 46 | 33 | 43 |
| Doctors of Science | 1 | 0 | 0 | 1 | 0 |
| Metallurgical Engineers | 0 | 1 | 0 | 0 | 0 |
| Mining Engineers | 0 | 0 | 3 | 1 | 3 |
| Masters in Civil Engineering | 0 | 0 | 0 | 2 | 1 |
| Masters in Mechanical Engineering | 0 | 0 | 0 | 0 | 3 |
| Masters in Electrical Engineering | 0 | 0 | 0 | 0 | 1 |
| Masters in Architecture | 0 | 0 | 0 | 2 | 1 |
| Masters in Landscape Architecture | 0 | 0 | 0 | 1 | 1 |
| Masters in Forestry | 0 | 0 | 0 | 2 | 4 |
| Totals | 1145 | 1073 | 981 | 1098 | 964 |

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# INDEX


PAGE

Administrative Boards . . . . . 110, 171
Admission, Report of the Chairman of the Committee on . . . . . 11–14, 329
Admission to candidacy for S.B. . . . . 11
Ames, John S. . . . . 34, 150, 244
Andover Theological Seminary . . . . . 25, 156, 347
Appleton Chapel and the Phillips Brooks House, Report on . . 43, 225
Appointments Office, Report on . . . . . 49, 355
Arnold Arboretum, Report on . . . . . 242
Athletic Sports, Report on . . . . . 115
  Administration, the unstable condition of . . . . . 117
  Base-ball . . . . . 120
  Foot-ball . . . . . 118
  Graduate Treasurer . . . . . 116
  Reduction of intercollegiate contests . . . . . 118–120
  Rowing . . . . . 120
  Secretary . . . . . 116
Base-ball . . . . . 20, 120
Bermuda Natural History Society . . . . . 40
Botanic Garden, Report on . . . . . 237
Brooks, James W. . . . . 35, 150, 244
Bussey Institution . . . . . 12, 31, 151
Cambridge, gift to City of . . . . . 46
Carnegie Foundation . . . . . 39, 349
Cary, Austin . . . . . 34
Chemical Laboratory, Report on . . . . . 248
Class of 1883, gift of . . . . . 47
Classical Antiquities, Collection of, Report on . . . . . 316
Committee on Regulation of Athletic Sports . . . . . 19, 98, 111, 115
Degree in three years . . . . . 15–18, 108
Degree of S.B., requirements for admission to candidacy for . . . . . 11
Degrees conferred, 1904–08 . . . . . 362
Dental School, Report on . . . . . 29, 187
  Action of Faculty of Medicine in regard to . . . . . 192
  Change of titles of teachers in . . . . . 31
  Courses of instruction . . . . . 187
  New building for . . . . . 192
  Statistics as to work of . . . . . 188–190
  Summer School . . . . . 190, 191
Discobolus of the Vatican . . . . . 48




Digitized by Google

PAGE
Divinity School, Report on . . . . . 156
Andover Theological Seminary . . . . . 156
Courses of instruction . . . . . 160–163
Interchange of instruction with Faculty of Arts and Sciences . . . . 160
King's Chapel lectures . . . . . 157, 163
Lowell Institute . . . . . 157
Morison, Robert S. . . . . 163
Registration statistics . . . . . 159
Summer School of Theology . . . . . 158
Engineering, Division of, Report on . . . . . 255
Engineering Society, Harvard . . . . . 48, 152
Exchange of Professors with Germany . . . . . 44
Faculty of Arts and Sciences, Report on . . . . . 53
Administration of prizes . . . . . 98
Athletics . . . . . 98, 111
Graduate School of Business Administration . . . . . 99
Higher degrees in the Medical Sciences . . . . . 95
Jones, A. K., testimonial to . . . . . 102
Lowell Institute Collegiate Courses . . . . . 97
President, the . . . . . 103
Public honor to high scholars . . . . . 94
Summer Courses of Instruction . . . . . 87
University extension . . . . . 95
Fisher, Richard Thornton . . . . . 84
Fogg Art Museum, Report on . . . . . 310
Foot-ball . . . . . 20, 118
Forestry, Report on . . . . . 34–36, 150, 244
Free public lectures at Medical School . . . . . 30, 170
Garcelon, William F. . . . . 19, 116
Gay, Edwin F. . . . . 32, 99
Geographical Distribution of Students . . . . . 44, 361
Geology and Geography, Department of, Report on . . . . . 279
Germanic Museum, Report on . . . . . 313
Germany, exchange of Professors with . . . . . 44
Gifts . . . . . 52
Graduate School of Applied Science, Report on . . . . . 12, 149
Bussey Institution . . . . . 151
Enrolment in . . . . . 150
Forestry . . . . . 150
Harvard Engineering Society . . . . . 152
Lawrence Scientific School, registration in . . . . . 149
Graduate School of Arts and Sciences, Report on . . . . . 21, 122
A.M. degrees . . . . . 130, 145
A.M. degree in Law . . . . . 145
Association of American Universities . . . . . 142
Birthplaces of Graduate Students . . . . . 135
Classification of students . . . . . 122, 123, 126
Classification of students by subjects . . . . . 127
Colleges and universities represented . . . . . 138
Degrees, recommendations for: 1896–1908 . . . . . 134

Digitized by Google

PAGE
GRADUATE SCHOOL OF ARTS AND SCIENCES. — Concluded.
Dormitory for married students . . . . . 147
Fellowships and scholarships . . . . . 136, 137
Finances . . . . . 146
New students from other colleges . . . . . 129
Non-Resident Fellows . . . . . 141
Percentage of students in their first and following years . . . . . 128
Percentage of students without Harvard degrees . . . . . 128
Ph.D. degree . . . . . 132–134, 139–141
Reception, twelfth annual . . . . . 148
Registration . . . . . 122, 125
Resident Fellows . . . . . 142
Scholarships needed . . . . . 147
S.D. degree . . . . . 135
S.M. degree . . . . . 131, 134
Students from Harvard and from other colleges . . . . . 128
Tuition-fees . . . . . 143, 144
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION, Report on . . 32–34, 153
Gay, Edwin F. . . . . 99
Instructors and courses given in 1908–09 . . . . . 154, 155
GRAY HERBARIUM, Report on . . . . . 42, 231
Bequest of Mrs. W. B. Potter . . . . . 234
Harvard Club Scholarships . . . . . 46
HARVARD COLLEGE, Report on . . . . . 14, 104
A.B. degree . . . . . 105
Administrative Board . . . . . 110
Athletics . . . . . 111
Deaths . . . . . 104
Discipline . . . . . 110
Registration . . . . . 104
S.B. degree . . . . . 105
Scholarship, low grade of . . . . . 109
Scholarships with and without stipend . . . . . 110–113
Three-year degree . . . . . 108
Harvard Dining Association . . . . . 44, 45
Harvard Engineering Society . . . . . 48, 152
Harvard Teachers at Radcliffe College . . . . . 41
Holmes, Henry W. . . . . 9
ILLNESS REPORT . . . . . 39, 352
Investments . . . . . 51
Jack, John George . . . . . 84
JEFFERSON PHYSICAL LABORATORY, Report on . . . . . 253
Jones, A. K., testimonial to . . . . . 102
King's Chapel lectures . . . . . 157, 163
LAW SCHOOL, Report on . . . . . 26, 164
Collection of portraits . . . . . 167
Courses of study . . . . . 165, 166
Growth since 1870 . . . . . 164
Library . . . . . 167
Loan Fund, Harry Milton Levy . . . . . 167
Marking system . . . . . 349

Digitized by Google

PAGE
Lawrence Scientific School, Report on . . . . . 24, 149
Lowell Institute Collegiate Courses . . . . . 9, 97
Library, Report on . . . . . 36, 193
Accessions . . . . . 199–204
Addition to . . . . . 193–199
Admission to the book-stack . . . . . 210
Book-funds, new . . . . . 199
Catalogue Department . . . . . 216–219
Cleaning . . . . . 215
Departmental Libraries . . . . . 205, 206
Library of Congress cards . . . . . 217
Missing books . . . . . 214, 215
Open reading-room collections . . . . . 210
Ordering Department . . . . . 220–222
Radcliffe College, use of books by . . . . . 211
Shelf Department . . . . . 212
Special Reference Libraries . . . . . 207, 208
Staff . . . . . 222
Sunday use of reading-room . . . . . 211, 212
Use of books in College Library . . . . . 209
Lyon, David G. . . . . 42
Marking system in Law School . . . . . 26, 27, 349
Medical School, Report on . . . . . 30, 171
Administrative Board . . . . . 171
Alumni Fund . . . . . 180
Anatomy . . . . . 172
Anatomy, Comparative . . . . . 172
Bacteriology . . . . . 174
Chemistry, Biological . . . . . 174
Courses of instruction . . . . . 182, 183
Division of scholarships . . . . . 181
Elective work in fourth year . . . . . 183
Examination statistics . . . . . 184, 185
Museum, Warren . . . . . 179
Pathology . . . . . 174
Pathology, Comparative . . . . . 175
Pharmacology and Therapeutics . . . . . 176
Physiology . . . . . 173
Physiology, Comparative . . . . . 174
Proctor Fund . . . . . 180
Scholarships and fellowships . . . . . 181
Statistics, general . . . . . 186
Surgery . . . . . 177
Theory and Practice of Physic . . . . . 176
Medicine, Faculty of, Report on . . . . . 29, 168
Action in regard to Dental School . . . . . 169, 170, 192
Charles Follen Folsom Teaching Fellowship . . . . . 169
Free public lectures . . . . . 170
Memorial Hall . . . . . 44, 45

Digitized by Google

PAGE

Mineralogical Museum and Laboratories of Mineralogy and Petrography, Report on . . . . . 293
Mining and Metallurgy, Report on . . . . . 38, 288
Moore, Edward C. . . . . 43
Museum of Comparative Zoölogy, Report on . . . . . 269
Observatory, Report on . . . . . 40, 261
Peabody Museum of American Archaeology and Ethnology, Report on . . . . . 295
Phillips Brooks House, the . . . . . 43, 225
President, the . . . . . 103
Presidents of universities, colleges, and technical schools . . . . . 23, 345
Prizes, changes in administration of . . . . . 98
Psychological Laboratory, Report on . . . . . 259
Radcliffe College, Report on . . . . . 41, 325
Registration, decline in . . . . . 10
Reisner, George A. . . . . 42
Retiring allowances . . . . . 39
Samaria, excavations at . . . . . 41, 308
Scholarships, Harvard Club . . . . . 46
Scholarship, low grade of . . . . . 18, 109
Scholarship, public recognition of . . . . . 6, 94
Scholarship tests . . . . . 6
Schumacher, Gottlieb . . . . . 42
Semitic Museum, Report on . . . . . 41, 307
Smith, Theobald . . . . . 31
Special Students in the Law School . . . . . 27
Summer Courses of Instruction, Report on . . . . . 37, 87, 318
Teachers, distribution of . . . . . 5
Teachers' Endowment Fund . . . . . 46
Three-year degree . . . . . 15–17, 108
University, College, and Library account . . . . . 50, 51
University extension . . . . . 8, 95
Watson, Benjamin M. . . . . 31, 239
Weed, Arthur H. . . . . 116
Wheeler, William Morton . . . . . 32, 151, 275
Wright, John H. . . . . 21
Zoölogical Laboratory, Report on . . . . . 275

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# TREASURER'S STATEMENT

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# TREASURER'S STATEMENT

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# CONTENTS


| | Page |
|---|---|
| Distribution of administrative expenses | 5 |
| Result of the year for the College | 6 |
| Rate 5.05 per cent. for division of income among Funds | 6 |
| Premiums on bonds, repaid from income | 6 |
| Gains and losses by changes of investments | 6 |
| Fellowships, scholarships, loans, etc.; total | 7 |
| Unpaid term-bills charged off | 7 |
| Old Funds re-established | 8 |
| Composite Funds | 9 |
| Retiring allowances | 9 |
| Investments; classified summary showing amount and income of each kind | 10 |
| Increase in Funds, analysis of | 11 |
| Income and current expenses for Departments, general items only | 12 |
| **GIFTS** | |
| For capital | 23 |
| For immediate use | 27 |
| **PROPERTY** | |
| Investments. | |
| All, including general investments in detail | 60 |
| Special, of Funds invested separately | 65 |
| Funds and balances represented by the investments | 71 |
| **TOTAL RECEIPTS AND PAYMENTS** | |
| **Receipts** | |
| Income. | |
| From securities | 40 |
| " real estate investments | 46 |
| Total net income from investments | 48 |
| From students | 48 |
| Sundries | 52 |
| Gifts for immediate use | 52 |
| Exclusive of income. | |
| Gifts for capital | 54 |
| Sales of investments. | |
| General | 54 |
| Special | 56 |
| Sundries | 58 |
| **Payments** | |
| Total for each Department | 41 |
| For investments. | |
| General | 55 |
| Special | 55 |
| Sundries | 59 |




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## RECEIPTS AND PAYMENTS FOR DEPARTMENTS


| Table. | | Page |
|---|---|---|
| I. | University (administration and general objects) | 89 |
| | Net payments re-classified for distribution | 96 |
| II. | College, including Lawrence Scientific School, Graduate School of Arts and Sciences, and Graduate School of Applied Science. | |
| | Receipts. | |
| | Gifts for capital | 100 |
| | Gifts for immediate use | 102, 108 |
| | Income of Funds | 100 |
| | Receipts from students | 109 |
| | Sundries | 111 |
| | Payments. | |
| | Fellowships, scholarships, prizes, etc. | 111, 112, 115 |
| | From gifts | 117 |
| | Summer Schools | 118 |
| | Salaries | 119 |
| | For public buildings | 119 |
| | For dormitories (except Univ. Houses and Lands) | 120 |
| | General expenses | 120 |
| III. | Library | 122 |
| IV. | Divinity School | 126 |
| V. | Law School | 129 |
| VI. | Medical School | 131 |
| VII. | Dental School | 137 |
| VIII. | Bussey Institution | 139 |
| IX. | Arnold Arboretum | 140 |
| X. | Botanic Garden and Botanical Museum | 141 |
| XI. | Gray Herbarium | 142 |
| XII. | Observatory | 143 |
| XIII. | Museum of Comparative Zoölogy | 145 |
| XIV. | Peabody Museum of American Archaeology and Ethnology | 146 |
| XV. | Semitic Museum | 148 |
| XVI. | Germanic Museum | 149 |
| XVII. | William Hayes Fogg Art Museum | 150 |
| XVIII. | Jefferson Physical Laboratory | 151 |
| XIX. | Appleton Chapel | 153 |
| XX. | Phillips Brooks House | 154 |
| XXI. | Hemenway Gymnasium | 155 |
| XXII. | Stillman Infirmary | 156 |
| XXIII. | Sundry Funds for Special Purposes | 157 |
| XXIV. | Construction Accounts | 158 |
| XXV. | Sundry Accounts | 159 |
| | Balanced Summary of the Tables | 162 |

CERTIFICATE OF THE AUDITING COMMITTEES OF THE CORPORATION AND OVERSEERS . . . . . 163

INDEX . . . . . 165


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# TREASURER'S STATEMENT FOR 1907–08

To the Board of Overseers of Harvard College: —

The Treasurer submits the annual statement of the financial affairs of the University, for the year ending July 31, 1908.

This year, for the first time in the history of the University, administrative expenses and others incurred for the benefit of the University as a whole have been distributed amongst its Departments. This course was determined upon by the President and Fellows on February 11, 1907, when it was

"*Voted*, that the total net payments entered in the University Table of the Treasurer's Annual Statement be distributed and charged in the year 1907–08 and in each year thereafter, until further order of this Board, substantially in such shares as may be determined in each year by the application of the method used in a distribution of such payments for 1904–05 submitted to the Board by Allen Danforth, Ex-Comptroller, January 14, 1907."

In order that notice of this change might be given to the Departments long in advance of its going into effect, the vote was drawn so as not to apply to the year then in progress.

The result of the distribution of the above expenses this year has been to transfer from the University account, to accounts not included in the College and Library, payments amounting to $20,985.22. The combined accounts of the University, College and Library, after this distribution, show a surplus of $6,152.44. If the distribution had not been made they would have shown a deficit of $14,832.78 (see below).

All the other Departments, except the Stillman Infirmary, were able to meet this new "University charge." The Still-



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man Infirmary had to apply all its accumulated income towards meeting current expenses this year. Of the other Departments, the only ones which had to meet the new charge from accumulated income, or from gifts, were the Divinity School, the Dental School, the Arnold Arboretum and the Observatory. The amount of the "University charge" to each Department is shown on pages 12–22. The distribution is shown in full in the Tables, pages 94–156, and the method on pages 89 and 96–99.

The year's result referred to above for the College, taking the accounts of the University, College and Library together as usual, was affected by extraordinary charges amounting to $16,261.60, namely, for overdue term-bills charged off, and for nine Funds re-established, as stated in detail below.

The surplus, $6,152.44, was credited to the Henry L. Pierce (Residuary) Fund, the unrestricted Fund which contributed towards meeting the deficits in these accounts in the last two preceding years.

The net income of the general investments was divided at the rate of 5.05 per cent., except in the following cases, among the Funds and balances to which these investments belong. The exceptions are some temporary balances which were allowed lower rates of interest, and the balance called "Gains and Losses for General Investments," which, in accordance with the vote quoted below, was allowed no interest. The rate compared with that for 1906–07 shows an increase of 0.14 per cent. The income remaining after the above division, $535.27, is held for division with the income of the following year.

From the income of all bonds bought at a premium for general investments $9,025.49 was credited to the various accounts concerned, and for special investments $784.11, as the fair yearly repayment to make good the whole of the premiums at the maturity of the bonds.

The gain from the sale of securities held as general investments amounted to $537.77 during the year, and the loss amounted to $36,928.55, as shown on pages 159 and 161.

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These amounts were carried to the account called "Gains and Losses for General Investments," in accordance with the following vote of the President and Fellows, passed October 26, 1891: —

"*Voted*, that the sum of $23,341.97 being the net gain from sales of bonds at a profit, heretofore credited to the account of Railroad Bond Premiums, be transferred as of July 31, 1891, to a new account to be called 'Gains and Losses for General Investments,' which account shall be credited with all gains and charged with all losses hereafter arising from sales of property belonging to the general investments. As this account belongs pro rata to all the Funds sharing in general investments it is not to be allowed interest when its balance is on the credit side nor to be charged with interest when its balance is on the debit side."

"Gains and Losses for General Investments" had a credit balance July 31, 1908, of $564,965.92.

The gains from the sale of property held as special investments amounted to $25.00 during the year, and the losses to $205.25, as shown on pages 160 and 161. These amounts were carried to the accounts of the Funds to which the investments belonged.

The total paid to students on account of fellowships, scholarships, loans and awards of financial aid, amounted during the year to $134,536.49. This amount includes not only awards made partly or solely on account of need, but also fellowships and scholarships awarded partly or solely in recognition of high scholarship.

Unpaid term-bills amounting to $8,197.58, the gradual accumulation of thirty-four years, have been charged off as a current expense of the past year, and a recurrence of the accumulation has been rendered impossible. These changes were effected by the following vote of the President and Fellows, passed October 12, 1908: —

"*Voted*, that the amounts due on term-bills issued before the year 1907–08 unpaid on September 26, 1908, be charged in the accounts for 1907–08 to the departments in which such dues accrued, as follows: —

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(From the Bursar's letter of September 26, 1908.)

| | | |
|---|---|---|
| **University Account** | | |
| Veterinary School | $433.99 | |
| Miscellaneous | 30.00 | $463.99 |
| **College** | | |
| Undergraduates | $4,444.59 | |
| Lawrence Scientific School | 1,478.50 | |
| Graduate School of Arts and Sciences | 127.75 | 6,050.84 |
| **Law School** | | 546.29 |
| **Divinity School** | | 146.72 |
| **Medical School** | | 759.86 |
| **Dental School** | | 229.88 |
| Total | | $8,197.58 |

"That the total amounts due on term-bills issued in the year 1907–08 and thereafter, unpaid at the end of the year following that of issue, be charged in the accounts for such year to the departments in which the dues accrued.

"That receipts subsequent to September 26, 1908, on account of term-bills charged off as above be credited to the departments in which the dues charged off accrued."

Nine Funds, established by gift or bequest between 1650 and 1777, whose capital amounted to $9,746.77, were found by Mr. Allen Danforth to have been spent, contrary to the letter or the spirit of the terms upon which they were received. All had disappeared before the middle of the last century, having been carried into the "Stock Account," which was gradually used up. Therefore, on October 12, 1908, the President and Fellows

"*Voted*, in accordance with Mr. Danforth's recommendations in the cases below, that the following funds be established as a permanent record of the gifts represented: —

| | | |
|---|---|---|
| John Newgate | 1650 | $333.33 |
| John Coggan | 1652 | 1,500.00 |
| Thomas Hollis, for Treasurer | 1721 | 520.00 |
| Thomas Hutchinson | 1739 | 233.33 |
| Thomas Hubbard | 1774 | 1,000.00 |
| John Barnard | 1777 | 666.67 |
| Nathaniel Hulton | 1695 | 444.44 |
| Ezekiel Rogers | 1701 | 3,535.00 |
| Daniel Russell | 1679 | 1,514.00 |

and that the amounts necessary for the above purposes be taken from the surplus in the combined accounts of University, College and Library in 1907–08."

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Cases of the consolidation of several Funds under the title of one of them, the income of all being for the same purpose, were also discovered by Mr. Danforth. The names of the component Funds and the dates of their establishment have been inserted, therefore, in the Table of Funds and Balances, under the old title of each Fund now known to be composite. These Funds are the following (also shown on pages 73 and 80):

Hollis Professorship of Divinity.
Thomas Hollis (1721),
James Townsend (1738),
Daniel Henchman (1742),
William Dummer (1762),
Jonathan Mason (1798).

Hollis Professorship of Mathematics.
Thomas Hollis (1726),
Thomas Brattle (1713),
Daniel Henchman (1758),
William Dummer (1762).

Hancock Professorship.
Thomas Hancock (1765),
Stephen Sewall (1762).

Retiring allowances granted by the Carnegie Foundation for the Advancement of Teaching, to persons connected with Harvard University, and paid through the Treasurer of the University, amounted during the year to $13,478.38. Retiring allowances paid from the income of the Retiring Allowance Fund, which was established in 1879, amounted to $18,504.01. With retiring allowances amounting to $2,042.28 paid from current income, the total paid for this purpose was $34,024.67, as compared with $26,462.48 last year.

This amount, $34,024.67, was distributed amongst twenty persons, five of whom were paid at the rate of $1,000 or less; eight at the rate of $1,500 to $2,000; and seven at the rate of $2,625 to $3,333. During the year one of the above persons died, and five received retiring allowances for the first time. Of the entire number, fifteen began to receive retiring allowances during the last five years, four during the preceding five years, and one fourteen years ago.

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## SUMMARY OF INVESTMENTS

(For details, see pp. 40, 60 and 65)

| General Investments. | Principal, Aug. 1, 1907. | Principal, July 31, 1908. | Income. |
|---|---|---|---|
| Mortgages, Notes, &c., | $1,060,000.00 | $1,145,000.00 | $72,974.28 |
| Public Funds, | 106,584.55 | 106,584.55 | 4,687.02 |
| Railroad Bonds, | 5,388,335.47 | 5,261,512.27 | 221,433.36 |
| Traction Bonds, | 1,576,484.07 | 1,531,204.17 | 67,517.40 |
| Sundry Bonds, | 2,571,699.23 | 2,555,338.79 | 116,616.70 |
| Railroad Stocks, | 1,503,286.20 | 1,612,909.47 | 73,754.75 |
| Manufacturing and Telephone Stocks, | 407,585.41 | 510,122.91 | 37,448.00 |
| Real Estate Trust Stocks, | 695,421.60 | 695,421.60 | 25,061.50 |
| Sundry Stocks, | 233,169.50 | 233,169.50 | 7,910.00 |
| Real Estate, | 2,836,110.24 | 2,917,952.97 | 178,708.06 |
| | $16,378,676.27 | $16,569,216.23 | $806,111.07 |
| Advances to | | | |
| Antitoxin Stable, | 404.89 | ..... | ..... |
| Botanic Department, | 7,352.39 | 6,619.49 | 367.62 |
| **Uriah A. Boyden** Fund, | 9,030.62 | 10,606.90 | ..... |
| **Bussey** Trust, | 348,227.21 | 347,227.21 | 13,850.78 |
| Classical Publication Fund of the **Class of 1856**, | 1,750.82 | 2,305.21 | 87.54 |
| Dental School Real Estate, | 87.58 | ..... | ..... |
| **Calvin & Lucy Ellis** Real Estate, | 402.02 | 1,217.64 | 20.09 |
| Medical School, | 6,373.03 | 2,629.48 | 318.65 |
| " " Undertaking, | ..... | ..... | 1,493.71 |
| Observatory, | 1,024.63 | ..... | 51.23 |
| **Peabody** Museum of American Archaeology and Ethnology, | 2,774.22 | 991.35 | 124.84 |
| **Stillman** Infirmary, | ..... | 2,517.86 | ..... |
| Woodland Hill Fund, | 2,875.65 | 3,357.02 | 143.78 |
| **Harvard** Dining Association, | 173,295.30 | 165,595.53 | 7,831.66 |
| **Randall** Hall Association, | 29,702.27 | 28,202.27 | 1,485.13 |
| Stadium, | 31,019.13 | 12,263.24 | 1,244.11 |
| Sundry Accounts, | 1,895.66 | 6,558.27 | ..... |
| Term Bills overdue. | | | |
| Issued before August 1, 1907, | 58,858.99 | 8,197.58 | ..... |
| Issued for 1907–08, in | | | |
| January, | ..... | 673.89 | ..... |
| June, | ..... | 49,397.47 | ..... |
| Cash in City Trust Co., | 80,132.02 | 105,657.85 | 921.61 |
| " Equitable Trust Co., | 697.65 | 75,741.95 | 434.30 |
| " Merchants National Bank, | 908.71 | 6,871.15 | 59.77 |
| " National Union Bank, | 1,547.29 | 571.40 | 24.11 |
| " Old Boston National Bank, | 65,580.93 | 22,039.23 | 1,295.27 |
| " hands of Bursar, | 30,232.67 | 39,372.05 | ..... |
| **General Investments, totals,** | $17,232,849.95 | $17,466,576.33 | $835,864.26 |
| **Special Investments,** " (p. 70), | 2,659,799.97 | 2,803,416.15 | 117,368.02 |
| **Totals** (see pp. 48, 64), | $19,892,649.92 | $20,269,992.48 | $953,232.28 |



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## CHANGES IN FUNDS

| | |
|---|---|
| **Total of Funds and balances, July 31, 1908,** . . . . | $20,271,246.42 |
| " " " **August 1, 1907,** . . . | 19,892,649.92 |
| **Increase during the year,** as shown in detail below, | $378,596.50 |

### ANALYSIS OF INCREASE

| | | |
|---|---|---|
| **Decrease of Funds and balances.** | | |
| Law School balance, by payments towards construction of Langdell Hall (see p. 14), . . . . . | | $101,904.33 |
| Funds applied to the Medical School Undertaking, by payments towards construction (see pp. 158–159), . . . . . | | 49,080.40 |
| Bussey Institution balance, by payments towards construction of the Antitoxin Stable (see p. 16), . . . . . | | 12,410.38 |
| Sundry balances spent, mainly of gifts for special purposes, | | 6,793.88 |
| Loss by changes of investments (see p. 161), . . . . . | | 37,133.80 |
| | | $207,272.79 |
| **Less increase, excluding gifts for capital.** | | |
| Nine Funds, established by gift or bequest between 1650 and 1777, whose capital was spent contrary to the letter or the spirit of the terms upon which the Funds were received, now re-established from the current income of the College (see p. 8), . . . . . | $9,746.77 | |
| **Henry L. Pierce** (Residuary) Fund, by receipt of the surplus in the combined accounts of the University, College and Library, in partial repayment of the amount previously furnished by this unrestricted Fund to meet deficits in these accounts (see p. 13), . . . . . | 6,152.44 | |
| Net increase of Funds and balances which appear at both the beginning and the end of the year, excluding the Law School balance, Funds applied to the Medical School Undertaking, the Bussey Institution balance, and the **Henry L. Pierce** (Residuary) Fund, . . . . . | 88,987.34 | |
| Increase of Funds established during the year, . | 1,885.89 | |
| Credit balances created during the year, mainly of gifts for immediate use, . . . . . | 28,762.05 | |
| Gain by changes of investments (see pp. 159, 160), | 562.77 | 136,046.76 |
| **Net decrease, excluding gifts for capital** (as on p. 162), | | $71,226.03 |

| | |
|---|---|
| **Gifts for capital** (see p. 54), . . . . . | $449,822.53 |
| **Less net decrease, excluding gifts for capital,** . . | 71,226.03 |
| **Increase during the year** (as above), . . . . . | $378,596.50 |



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## INCOME AND CURRENT EXPENSES FOR DEPARTMENTS

### GENERAL ITEMS ONLY

These tables show for each Department the receipts available for salaries, retiring allowances and general expenses, the amount of such expenses, and the resulting surplus, or deficit. They are summaries of only these general items in the more comprehensive and detailed tables beginning on page 89.

### THE UNIVERSITY

(See Table No. I, page 90)

| | | |
|---|---|---|
| **Available for Expenses** | | |
| Income of Funds and balances, | $61,300.46 | |
| Gifts, | 13,500.38 | |
| Rents, | 2,810.00 | |
| Sales and repayments, | 1,770.31 | $79,381.15 |
| **Payments** | | |
| Total of payments entered in the University Table, | $144.795.70 | |
| Less net payments distributed by the University charge (see pp. 94, 99), | 108,031.22 | |
| Payments not distributed, being those met by income specifically restricted to them (p. 94), | $36,764.48 | |
| Unpaid term-bills issued before Aug. 1, 1907, charged off, | 463.99 | |
| University charge, to the University (see pp. 94, 95). | | |
| Overseers' expenses, | 2,846.18 | |
| Museum of Comparative Zoölogy (part, see p. 146), | 1,955.21 | |
| Peabody Museum of American Archaeology and Ethnology (part, see p. 148), | 1,656.52 | |
| Semitic Museum (part, see p. 149), | 1,257.63 | |
| Germanic Museum (part, see p. 150), | 90.19 | |
| William Hayes Fogg Art Museum (part, see p. 151), | 270.06 | |
| Appleton Chapel (part, see p. 153), | 1,342.68 | |
| Phillips Brooks House (part, see p. 155), | 161.78 | |
| Other items, | 14,743.88 | 61,552.60 |
| Surplus, | | $17,828.55 |

### THE COLLEGE, including the LAWRENCE SCIENTIFIC SCHOOL, the GRADUATE SCHOOL OF ARTS AND SCIENCES, and the GRADUATE SCHOOL OF APPLIED SCIENCE

(See Table No. II, page 100)

| | | |
|---|---|---|
| **Available for Expenses** | | |
| Income of Funds and balances, | $252,670.80 | |
| Gifts, | 9,459.62 | |
| Sales, | 2,767.57 | |
| Insurance and sundry repayments, | 217.74 | |
| Receipts from students (except tuition fees in the School for Social Workers and Gymnasium locker fees), | 606,052.91 | |
| Sundry receipts at the summer camp at Squam Lake, | 9,288.27 | $880,456.41 |
| Amount available for expenses, carried forward, | | $880,456.41 |



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THE COLLEGE, CONTINUED

| | | | |
|---|---|---|---|
| Amount available for expenses, brought forward, . . . | | | $880,456.41 |
| PAYMENTS | | | |
| Salaries for instruction, except next item, | $531,481.10 | | |
| Austin Teaching Fellowships, . . . | 13,615.00 | $545,096.10 | |
| Salaries for administration, . . . . . | | 15,891.65 | |
| Appropriations, . . . . . | | 49,983.87 | |
| Scholarships from unrestricted income, . . . . . | | 5,700.00 | |
| Expenses on account of public buildings, . . . . . | | 31,641.04 | |
| Expenses on account of dormitories, . . . . . | | 37,486.71 | |
| Summer Schools, . . . . . | | 28,556.26 | |
| Museum of Comparative Zoölogy (part, see p. 146), . | | 4,077.50 | |
| Jefferson Physical Laboratory (part, see p. 152), . . | | 766.23 | |
| Hemenway Gymnasium (part, see p. 155), . | $7,677.81 | | |
| Less included in University charge below, | 219.60 | 7,458.21 | |
| General expenses (shown in detail on p. 121), . . . . | | 70,310.24 | |
| | | $796,917.81 | |
| Unpaid term-bills issued before Aug. 1, 1907, charged off, | | 6,050.84 | |
| Nine Funds re-established (see p. 8), . . . . . | | 9,746.77 | |
| University charge (p. 122), . . . . . | | 60,202.34 | $872,917.76 |
| Surplus, . . . . . | | | $7,538.65 |

## THE LIBRARY

(See Table No. III, page 122)

| | | | |
|---|---|---|---|
| AVAILABLE FOR EXPENSES | | | |
| Income of Funds and balances, . . . . . | | $34,181.26 | |
| Gifts, . . . . . | | 2,971.05 | |
| Fees and sales, . . . . . | | 138.00 | |
| Accumulated fines appropriated, . . . . . | | 1,000.00 | $38,290.31 |
| PAYMENTS | | | |
| Salaries, . . . . . | $18,500.00 | | |
| Services, cataloguing, administration, etc., . | 21,268.01 | | |
| Services in Department Libraries, . . . . | 1,215.66 | | |
| General expenses, . . . . . | 14,657.96 | $55,641.63 | |
| University charge (p. 126), . . . . . | | 1,863.44 | 57,505.07 |
| Deficit, . . . . . | | | $19,214.76 |

## UNIVERSITY, COLLEGE AND LIBRARY

COMBINED ACCOUNTS

| | | |
|---|---|---|
| Surplus as above in University, . . . . . | $17,828.55 | |
| " " College, . . . . . | 7,538.65 | $25,367.20 |
| Deficit as above in Library, . . . . . | | 19,214.76 |
| Surplus in the combined accounts, which was repaid to principal of the Henry L. Pierce (Residuary) Fund, in partial return for the amount previously furnished by this unrestricted Fund to meet deficits in these accounts, . . . . . | | $6,152.44 |
| In 1906–07 there was a deficit of . . . . . | | $16,713.64 |
| Principal of the Henry L Pierce (Residuary) Fund, July 31, 1908, | | $167,622.51 |

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## DIVINITY SCHOOL

(See Table No. IV, page 126)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balances, | $29,813.75 | |
| Gifts, | 1,510.71 | |
| Sales, | 77.80 | |
| Receipts from students, | 8,849.90 | $40,252.16 |

PAYMENTS

| | | |
|---|---|---|
| Salaries for instruction, | $30,656.84 | |
| Salaries for Librarian and Secretary, | 1,750.00 | |
| Books, | 294.62 | |
| General expenses, | 6,728.88 | |
| | $39,430.34 | |
| Total amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, | 146.72 | |
| University charge, | 2,181.92 | 41,758.98 |
| Deficit, | | $1,506.82 |

| | |
|---|---|
| In 1906–07 there was a deficit of | $102.80 |
| The Divinity School credit balance on July 31, 1908, was | $4,754.38 |

## LAW SCHOOL

(See Table No. V, page 129)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balances, | $24,143.76 | |
| Sales, | 5.25 | |
| Receipts from students, | 105,779.00 | $129,928.01 |

PAYMENTS

| | | |
|---|---|---|
| Salaries for instruction, | $56,305.00 | |
| Salaries for administration, | 12,339.91 | |
| Scholarships from unrestricted income, | 4,650.00 | |
| Books, | 18,183.80 | |
| General expenses, | 19,285.76 | |
| | $110,764.47 | |
| Total amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, | 546.29 | |
| University charge, | 7,165.07 | |
| | $118,475.83 | |
| Langdell Hall, construction, | 113,356.51 | $231,832.34 |
| Deficit, caused by the payment of $113,356.51 towards the cost of Langdell Hall, from current and accumulated income, | | $101,904.33 |
| Otherwise there would have been a surplus of | | $11,452.18 |

| | |
|---|---|
| In 1906–07, after the payment of $246,417.40 towards the cost of Langdell Hall, from current and accumulated income, there was a deficit of | $215,286.08 |
| Otherwise there would have been a surplus of | $31,131.32 |
| The Law School credit balance on July 31, 1908, was | $30,552.54 |

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## MEDICAL SCHOOL

(See Table No. VI, page 131)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balances, | $121,651.65 | |
| Gifts, | 7,722.25 | |
| Receipts from students, | 75,500.79 | |
| Sales, | 3,693.53 | |
| Repayments, | 828.75 | $209,396.97 |
| Amount available for expenses, | | $209,396.97 |

PAYMENTS

| | | |
|---|---|---|
| Salaries for instruction, except next item, | $117,800.67 | |
| Austin Teaching Fellowships, | 2,500.00 | $120,300.67 |
| Salaries for administration, | | 2,120.00 |
| Retiring allowance, | | 1,000.00 |
| Annuity (part), | | 251.72 |
| Appropriations, | | 22,609.78 |
| General expenses, | | 53,028.30 |
| | | $199,310.47 |
| Total amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, | | 759.86 |
| University charge, | 5,583.09 | 205,653.42 |
| Surplus, | | $3,743.55 |
| In 1906–07 there was a deficit of | $819.64 | |
| The Medical School debit balance on July 31, 1908, was | $2,629.48 | |

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## DENTAL SCHOOL

(See Table No. VII, page 137)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balances, | $2,047.74 | |
| Fees from Infirmary, | 4,724.33 | |
| Sales, | 378.69 | |
| Receipts from students, | 12,357.62 | $19,508.38 |

PAYMENTS.

| | | |
|---|---|---|
| Salaries for instruction, | $6,516.00 | |
| Salaries for administration, | 700.00 | |
| General expenses, | 12,628.05 | |
| | $19,844.05 | |
| Total amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, | 229.88 | |
| University charge, | 612.87 | 20,686.80 |
| Deficit, | | $1,178.42 |
| In 1906–07 there was a surplus of | $1,237.56 | |
| The Dental School credit balance on July 31, 1908, was | $13,017.25 | |

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## BUSSEY INSTITUTION

(See Table No. VIII, page 139)

### Available for Expenses

| | | |
|---|---|---|
| Income of Funds and balances, | $14,621.70 | |
| Gift, | 1,000.00 | |
| Insurance premium returned, | 6.88 | |
| Rents, | 1,325.32 | |
| Sales, | 233.32 | |
| Board of animals, | 6,258.54 | |
| Horticultural Department receipts, | 1,404.80 | |
| Receipts from students, | 3,045.00 | $27,895.56 |

### Payments

| | | |
|---|---|---|
| Salaries for instruction, | $8,400.00 | |
| Horticultural Department expenses, | 1,668.38 | |
| General expenses, | 9,681.68 | |
| | $19,750.06 | |
| University charge, | 378.72 | |
| | $20,128.78 | |
| Antitoxin Stable, total charges for construction, paid from current and accumulated income, | 20,177.16 | $40,305.94 |
| Deficit, caused by the payment of $20,177.16, for construction of the Antitoxin Stable, | | 12,410.38 |
| Otherwise there would have been a surplus of | | $7,766.78 |
| In 1906–07 there was a surplus of | $1,904.59 | |
| The Bussey Institution credit balance on July 31, 1908, was | $18,320.69 | |

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## ARNOLD ARBORETUM

(See Table No. IX, page 140)

### Available for Expenses

| | | |
|---|---|---|
| Income of Funds and balance, | $16,461.53 | |
| Gifts, | 6,705.23 | |
| Sales, | 2,351.72 | $25,518.48 |

### Payments

| | | |
|---|---|---|
| Salaries, | $5,750.00 | |
| Books, | 4,505.23 | |
| General expenses, | 16,871.02 | |
| | $27,126.25 | |
| University charge, | 474.69 | 27,600.94 |
| Deficit, | | $2,082.46 |
| In 1906–07 there was a deficit of | $4,385.10 | |
| The Arboretum Construction Gifts credit balance on July 31, 1908, was | $22,917.59 | |

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## BOTANIC GARDEN AND BOTANICAL MUSEUM

(See Table No. X, page 141)

### Available for Expenses

| | | |
|---|---|---|
| Income of Funds, | $4,677.29 | |
| Gifts, | 3,600.00 | |
| Rent, | 700.00 | |
| Sales, | 250.00 | |
| From laboratory fees, | 259.65 | |
| Repayment from the Gray Herbarium, | 404.21 | $9,891.15 |

### Payments

| | | |
|---|---|---|
| Interest on debt, | $867.62 | |
| General expenses, | 8,640.70 | |
| | $9,008.32 | |
| University charge, | 149.93 | 9,158.25 |
| Surplus, | | $732.90 |
| In 1906–07 there was a surplus of | $1,638.39 | |
| The debt of the Botanic Garden and Botanical Museum on July 31, 1908, was | $6,619.49 | |

## GRAY HERBARIUM

(See Table No. XI, page 142)

### Available for Expenses

| | | |
|---|---|---|
| Income of Funds and balance, | $8,417.88 | |
| Asa Gray's copyrights, | 799.33 | |
| Gifts, | 2,238.00 | |
| Sales and commissions, | 2,850.43 | $14,305.64 |

### Payments

| | | |
|---|---|---|
| Salaries, | $5,450.00 | |
| General expenses, | 6,664.70 | |
| Repayment to the Botanic Garden, | 404.21 | |
| | $12,518.91 | |
| University charge, | 141.66 | 12,660.57 |
| Surplus, | | $1,645.07 |
| In 1906–07 there was a deficit of | $1,456.23 | |
| The Gray Herbarium credit balance on July 31, 1908, was | $1,923.54 | |

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## OBSERVATORY

(See Table No. XII, page 143)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds, | $33,540.88 | |
| Gifts, | 3,394.61 | |
| Rent, | 600.00 | |
| Sales, etc., | 132.61 | |
| Insurance awarded for loss of instruments, | 250.00 | |
| From Trustees of Sturgis Fund, for printing Annals, | 2,628.78 | $40,546.88 |

PAYMENTS

| | | |
|---|---|---|
| Salaries, | $18,200.00 | |
| Services, | 8,729.29 | |
| Interest on debt, | 51.23 | |
| General expenses, | 14,320.68 | |
| | $41,301.20 | |
| University charge, | 2,310.44 | 43,611.64 |
| Deficit, which, together with the debt of the Observatory on August 1, 1907, $1,024.63, was paid upon the order of Professor E. C. Pickering with part of the principal of the "Fund for the Advancement of Astronomical Science (1902)," at his disposal, | | $3,064.76 |
| In 1906–07 there was a surplus of | $4,441.96 | |
| The Observatory had neither a credit nor a debit balance on July 31, 1908. | | |

---

## MUSEUM OF COMPARATIVE ZOÖLOGY

(See Table No. XIII, page 145)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balance, | $30,807.61 | |
| Use of lecture room, | 700.00 | $31,507.61 |

PAYMENTS

| | | | |
|---|---|---|---|
| Salaries, | $11,100.00 | | |
| General expenses, | 28,458.80 | | |
| | $39,558.80 | | |
| University charge, | 1,955.21 | | |
| | $41,514.01 | | |
| Less University charge, paid from University income (see Table I, page 95), | $1,955.21 | | |
| Amount paid from College income (see Table No. II, page 117), | 4,077.50 | 6,032.71 | 35,481.30 |
| Deficit, | | | $3,973.69 |
| In 1906–07 there was a deficit of | $3,640.39 | | |
| The Museum of Comparative Zoölogy credit balance on July 31, 1908, was | $28,100.44 | | |

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## PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY

(See Table No. XIV, page 146)

### Available for Expenses

| | | |
|---|---|---|
| Income of Funds, | $6,569.69 | |
| Gifts, | 2,740.00 | |
| Use of heating plant, | 75.00 | $9,384.69 |

### Payments

| | | | |
|---|---|---|---|
| Salary of Peabody Professor and Curator, | | $2,385.60 | |
| Interest on debt, | | 124.84 | |
| General expenses, | | 6,502.87 | |
| | | $9,013.31 | |
| Less amount formerly paid from University income, now included in the University charge below, | | 1,411.49 | |
| | | $7,601.82 | |
| University charge, | | 1,840.57 | |
| | | $9,442.39 | |
| Less amount transferred. | | | |
| 90% to University, | $1,656.52 | | |
| 10% to College, | 184.05 | 1,840.57 | 7,601.82 |
| Surplus, | | | $1,782.87 |
| In 1906–07 there was a deficit of | | $656.43 | |
| The debt of the Peabody Museum of American Archaeology and Ethnology on July 31, 1908, was | | $991.35 | |

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## SEMITIC MUSEUM

(See Table No. XV, page 148)

| | |
|---|---|
| Available for Expenses, | Nothing. |

### Payments

| | | | |
|---|---|---|---|
| Salary of Curator, | | | $500.00 |
| General expenses, | | | 1,193.76 |
| Amount formerly paid from University income, | | | $1,693.76 |
| Less this amount now included in the University charge below, | | | 1,693.76 |
| | | | ..... |
| University charge, | | | $1,796.61 |
| Deficit, | | | $1,796.61 |
| Less amount transferred. | | | |
| 70% to University, | | $1,257.63 | |
| 30% to Divinity School, | | 538.98 | 1,796.61 |
| In 1906–07 there was a deficit of | | $1,500.00 | |

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## GERMANIC MUSEUM

(See Table No. XVI, page 149)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds, | $1,329.26 | |
| Sales, | 50.25 | $1,379.51 |

PAYMENTS

| | | |
|---|---|---|
| General expenses, | $1,224.09 | |
| University charge, | 90.19 | |
| | $1,314.28 | |
| Less University charge transferred to University, | 90.19 | 1,224.09 |
| Surplus, | | $155.42 |

| | |
|---|---|
| In 1906–07 there was a deficit which was paid from University income, | $75.32 |
| The Germanic Museum credit balance on July 31, 1908, was | $155.42 |

## WILLIAM HAYES FOGG ART MUSEUM

(See Table No. XVII, page 150)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balance, | $2,581.17 | |
| Sales, etc. | 107.64 | $2,688.81 |

PAYMENTS

| | | | |
|---|---|---|---|
| Salary of Curator, | | $500.00 | |
| General expenses, | | 4,279.74 | |
| | | $4,779.74 | |
| Less amount formerly paid from University income, now included in the University charge below, | | 2,495.14 | |
| | | $2,284.60 | |
| University charge, | | 2,705.90 | |
| | | $4,990.50 | |
| Less amount transferred. | | | |
| 10% to University, | $270.06 | | |
| 90% to College, | 2,435.84 | 2,705.90 | 2,284.60 |
| Surplus, | | | $404.21 |

| | |
|---|---|
| In 1906–07 there was a surplus of | $199.55 |
| The William Hayes Fogg Art Museum credit balance on July 31, 1908, was | $510.08 |

## JEFFERSON PHYSICAL LABORATORY

(See Table No. XVIII, page 151)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balance, | $3,881.78 | |
| Sale, | 87.00 | $3,968.78 |
| Amount available for expenses, carried forward, | | $3,968.78 |

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JEFFERSON PHYSICAL LABORATORY, CONTINUED

| | | |
|---|---|---|
| Amount available for expenses, brought forward, . . . | | $3,968.78 |
| PAYMENTS | | |
| General expenses, . . . . . | $3,687.58 | |
| University charge, . . . . . | 238.99 | |
| | $3,926.57 | |
| Less the amount which was paid from College income (see Table No. II, page 117), . . . . . | 766.23 | 3,160.34 |
| Surplus, . . . . . | | $808.44 |
| In 1906–07 there was a deficit of . . . . . | $67.77 | |
| The Jefferson Physical Laboratory credit balance on July 31, 1908, was . . . . . | $2,675.20 | |

## APPLETON CHAPEL

(See Table No. XIX, page 153)

| | | |
|---|---|---|
| AVAILABLE FOR EXPENSES | | |
| Income of Funds, . . . . . | | $2,577.22 |
| PAYMENTS | | |
| Preaching and morning services, . . . . . | $3,174.65 | |
| Salaries of administrator, organist, and choir-master, . . | 2,600.00 | |
| General expenses, . . . . . | 3,382.89 | 9,157.54 |
| Amount formerly paid from University income, . . . . . | | $6,580.32 |
| Less this amount now included in the University charge below, . . | | 6,580.32 |
| | | ..... |
| University charge, . . . . . | | $6,713.39 |
| Deficit, . . . . . | | $6,713.39 |
| Less amount transferred. | | |
| 20% to University, . . . . . | $1,342.68 | |
| 80% to College, . . . . . | 5,370.71 | 6,713.39 |
| In 1906–07 there was a deficit of . . . . . | $6,361.22 | |

## PHILLIPS BROOKS HOUSE

(See Table No. XX, page 154)

| | | |
|---|---|---|
| AVAILABLE FOR EXPENSES | | |
| Income of Funds, . . . . . | $1,650.04 | |
| Gift, . . . . . | 55.00 | $1,705.04 |
| PAYMENTS | | |
| Salary of Secretary, . . . . . | $500.00 | |
| General expenses, . . . . . | 2,720.35 | 3,220.35 |
| Amount formerly paid from University income, . . . . . | | $1,515.31 |
| Less this amount included in University charge below, . . . . . | | 1,515.31 |
| | | ..... |
| University charge, . . . . . | | $1,616.78 |
| Deficit, . . . . . | | $1,616.78 |
| Less amount transferred. | | |
| To University, . . . . . | $161.78 | |
| " College, . . . . . | 1,151.72 | |
| " Divinity School, . . . . . | 12.48 | |
| " Law School, . . . . . | 290.80 | 1,616.78 |
| In 1906–07 there was a deficit of . . . . . | $1,857.02 | |

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## HEMENWAY GYMNASIUM

(See Table No. XXI, page 155)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Fees for the use of the Gymnasium, | $30.00 | |
| Fees for the use of Gymnasium lockers, | 2,188.00 | $2,218.00 |

PAYMENTS

| | | |
|---|---|---|
| Salaries, | $5,000.00 | |
| General expenses, | 6,634.48 | |
| | $11,634.48 | |
| University charge, | 277.45 | 11,911.93 |
| Deficit, | | $9,693.93 |
| Less amount transferred to the following Departments in proportion to the number of students. | | |
| To College, | $7,677.81 | |
| " Divinity School, | 83.67 | |
| " Law School, | 1,932.45 | 9,693.93 |
| In 1906–07 there was a deficit of | $8,504.30 | |

## STILLMAN INFIRMARY

(See Table No. XXII, page 156)

AVAILABLE FOR EXPENSES

| | | |
|---|---|---|
| Income of Funds and balances, | $73.63 | |
| Annual fees, | 14,292.00 | |
| Receipts from patients, | 5,596.34 | $19,961.97 |

PAYMENTS

| | | |
|---|---|---|
| Services — administration, nursing, etc., | $7,534.44 | |
| Other expenses, | 15,198.08 | |
| | $22,732.52 | |
| University charge, | 1,205.35 | 23,937.87 |
| Deficit, | | $3,975.90 |
| In 1906–07 there was a surplus of | $361.30 | |
| The debt of the Stillman Infirmary on July 31, 1908, was | $2,517.86 | |

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## GIFTS FOR CAPITAL

### ESTABLISHING NEW FUNDS OR INCREASING OLD ONES

For the Arnold Arboretum Fund, from

| | |
|---|---|
| Caleb Chase | $200 |
| Henry P. Curtis | 10 |
| H. C. Ernst | 10 |
| Robert H. Gardiner | 25 |
| B. F. Keith | 130 |
| Massachusetts Society for Promoting Agriculture | 500 |
| A. Shuman | 100 |
| | $975 |

Through Benjamin W. Nichols, Treasurer, $100.95, the balance of the Fund of the Class of 1842, an unrestricted gift to the College.

From members of the Class of 1881, $9,055.03, to be added to the "Twenty-fifth Anniversary Fund of the Class of 1881."

From members of the Class of 1882, $15,676.20, to be added to the Fund of the Class of 1882, established on the twenty-fifth anniversary of their graduation.

From members of the Class of 1883, on the twenty-fifth anniversary of their graduation, $80,510.63, which with the additional gifts pledged, increasing the amount to $100,000.62, shall be known as the "Class of 1883 Fund." The use of the income is unrestricted.

From the Class of 1883, $250, the income to be used in caring for the bust of James Russell Lowell, the gift of the Class, placed in front of Massachusetts Hall.

From Arthur T. Lyman, securities valued at $25,000, to be added to his previous gift of like amount establishing a permanent Fund, the income of which "may be entirely unrestricted in its uses for the general benefit of Harvard College, at the discretion of the Corporation."

For the Teachers' Endowment Fund, $61,542.82 additional, from previous contributors.



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An unrestricted gift of five shares of stock of the Harvard Riverside Associates, from

| | |
|---|---|
| Louis B. Thacher, one share | $1,000 |
| Henry B. Chapin, two shares | 2,000 |
| Robert W. Emmons, 2d, one share | 1,000 |
| Laurence Minot, one share | 1,000 |
| | $5,000 |

Toward the foundation of a chair in German Language and Literature, from

| | |
|---|---|
| Ernst Emde, | $50 |
| Charles Spielmann, | 100 |
| | $150 |

(These and the previous gifts for this purpose have been returned to the givers.)

From the estate of Mrs. W. B. Potter of Boston, Mass., $23,604.68 additional, after the payment of $169.18, the legacy tax of the State of New York, and securities valued at $115,600, additional to securities previously received, "to be used and applied in connection with the Gray Herbarium and to be called 'The Sarah E. Potter Endowment Fund.'"

From the anonymous founder of the Professorship of Hygiene, securities valued at $20,915, to be added to the Fund of that professorship.

From the estate of Miss Mary P. Ropes, securities valued at $47,576.87, "for the support of, or to assist in endowing, a Professorship to be known as the Nathaniel Ropes Chair of Political Economy. If the income from the stock is more than sufficient for the support of the professorship, the Peabody Museum of Archaeology and Ethnology of which Professor F. W. Putnam is at the present time Curator, to annually receive the surplus."

From anonymous givers, $70 additional, and $19.40, interest on gifts, for addition to the principal of the Shaler Memorial Fund, the income of which is to be used under stated conditions "for the benefit of the Division of Geology in support of original research and in the publication of the results of research."

From F. von Benkendorff, $50, to be added to the principal of the Emperor William Fund for the maintenance of the Germanic Museum.

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From the estate of Jerome Wheelock, of Worcester, Mass., $10, the fifth payment of that amount for establishing the Jerome Wheelock Fund of $100,000.

From Emile F. Williams, $100, to be added to the principal of the Asa Gray Memorial Fund for the Gray Herbarium.

From the Parkman Memorial Committee, $425.96 in cash, and securities valued at $5,500, to establish the Francis Parkman Memorial Fund, "the income only of which is to be used for the purchase of books relating to Canada for the College Library, to build up a Parkman Memorial Collection relating to Canadian history." A portion of the income may be added to the principal.

From Miss Maria Whitney, securities valued at $5,000; the income to be applied "to the care and increase of the 'Whitney Library,' of the Museum of Comparative Zoölogy," but not toward salaries.

From Mr. and Mrs. Edward W. Clark, securities valued at $10,000, to found two scholarships in memory of their son, George Newhall Clark, of the Class of 1908. These scholarships, with an income of $250 each, are to be assigned to Freshmen in need of aid, consideration being given to character, scholarly attainment, and participation in out-of-door sports. Each scholarship is to be held for the entire College course, if the holder continue worthy.

From the estate of Miss Priscilla Clark Hodges of Boston, Mass., $4,000, to establish the "Priscilla Clark Hodges Scholarship," but without further restriction.

From the Boston Newsboys' Protective Union, $245.74, to be added to the principal of the Boston Newsboys' Scholarship Fund, the income of which is to be awarded, for the student's first year only, to that one of the newsboys eligible to compete who passes with the highest rank the examinations for admission to Harvard College.

Through the Harvard Medical Alumni Association, $1,500, to be added to the principal of the Harvard Medical Alumni Fund, established in 1907 by the Association. The income of

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the Fund is to be added to the principal, or applied to increase the salary of one or more of the younger instructors in the Medical School, or to be applied otherwise in accordance with the wishes of the Association.

From the estate of Edward M. Barringer of Schenectady, N. Y., $4,758.86, the final payment on account of his residuary bequest amounting to $30,213.49 for the "Edward M. Barringer fund," the income of which is first "(if the same shall be sufficient)" to maintain two scholarships in the Medical School of not less than $300 and $200 respectively, and second "for the use and benefit of" the Medical School.

In memory of the late Charles Follen Folsom, A.B. 1862, M.D. 1870, Lecturer on Hygiene, 1877–79, on Hygiene and Mental Diseases, 1879–80, on Mental Diseases, 1880–82, Assistant Professor of Mental Diseases, 1882–85, and Overseer, 1891–1903, from his friends, $11,818.64, to establish in the Medical School, the Charles Follen Folsom Memorial Teaching Fellowship in Hygiene, or in Mental and Nervous Diseases.

From friends and associates of the late Dr. John Homans, '58, of Boston, Mass., $516.75, to be added to the endowment of the John Homans Professorship in the Medical School.

*The total amount of these gifts for capital account is $449,972.53, as stated also on page 54.*

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## GIFTS FOR IMMEDIATE USE

From James P. Leake, $20, toward the cost of sending to high-school teachers in the state of Missouri copies of the new pamphlet describing the University.

From Edwin H. Abbot, $400, in accordance with the terms of his letter of gift, to be added to the income of the Teachers' Endowment Fund.

From the Carnegie Foundation for the Advancement of Teaching, $13,478.38, to pay the retiring allowances granted by the Executive Committee of this Foundation to persons connected with Harvard University.

From Henry L. Shattuck, $50, toward the general expenses of undergraduate instruction in Harvard College.

From Richard H. Troy, $2, "for the benefit of Harvard University."

From Gardiner M. Lane, $1,000, his fourth gift for lectures to be given under the auspices of the Department of the Classics by some well known scholar or literary man from abroad.

For a lecture on Spanish Literature given by James Fitzmaurice-Kelly, from

| | |
|---|---|
| J. D. M. Ford | $10 |
| Roger B. Merriman | 10 |
| Murray A. Potter | 25 |
| George B. Shattuck | 10 |
| | $55 |

From Horace S. Sears, $300, to provide for a course of lectures on Church Hymnody.

From an anonymous giver, $1,000, to provide suitable lodging and entertainment for the Visiting German Professor.

Towards the salary of an Instructor in the Department of Education, from

| | |
|---|---|
| Anonymous | $500 |
| Mrs. Anna K. Channing | 200 |
| Joseph Lee | 1,800 |
| | $2,500 |



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From Theodore Lyman, $150, for the salary of an Assistant in Physics during the first half of 1907–08.

From "Two Friends of the University" $2,000, to maintain on the staff of the Division of Physics for four years, beginning with 1908–09, a Fellow for Research in Physics with the rank and privileges of an Instructor, the appointment to be made annually upon the recommendation of the Division of Physics and to be open only to men who have attained the degree of Doctor of Philosophy.

From an anonymous giver, $1,000, to be added to the balance known as Scholarship and Beneficiary Money Returned "in acknowledgment of and in very partial return for the financial assistance that I received in my College course."

From an anonymous giver, $3,500 on account of aid received from the University by the giver and his brother in 1877–80, to be added to Scholarship and Beneficiary Money Returned.

From James W. Goodwin, $500, as a return of financial aid which he received while in Harvard College.

From Ernst T. Gundlach, $450, the return of this amount received by him while in College, in financial aid and in a scholarship.

From John F. Holland, $778.77, as a return of scholarships and other aid which he received in Harvard College.

From an anonymous giver, $350, for the Ricardo Prize Scholarship for 1908–09.

From the Dante Society, $150, to maintain the annual prize of one hundred dollars, first offered in 1885, for the best essay on a subject drawn from the Life or Works of Dante.

From Philippe Belknap Marcou, $50, for a prize for French composition, to be called the Jeremy Belknap Prize, as a memorial to Dr. Jeremy Belknap of the Class of 1872.

From the Harvard Menorah Society, $100, for a prize in 1907–08, the first gift of this amount, which through the generosity of Jacob H. Schiff the Society is able to offer to the University annually until further notice, for a prize to be

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known as the "Harvard Menorah Society Prize," for an essay by an undergraduate on a subject connected with the work and achievements of the Jewish people.

From James H. Hyde, $600, for the Fellowship of the Cercle Français de l'Université Harvard for 1907–08.

For the South End House Fellowship, from

| | |
|---|---|
| Julian L. Coolidge | $100 |
| Mrs. W. Scott Fitz | 60 |
| Randolph C. Grew | 100 |
| Edward J. Holmes | 40 |
| | $300 |

From the South End House Association, $225, for the South End House Fellowship in Social Education for the year 1907–08.

From Mrs. C. M. Barnard, Everett, Mass., $600, her twenty-fifth yearly gift for the Warren H. Cudworth Scholarships.

From the Harvard Club of Chicago, $300, for the Scholarship of the Harvard Club of Chicago for 1907–08.

From the Harvard Club of Cleveland, $400, for the Scholarship of the Harvard Club of Cleveland for 1907–08.

From the Harvard Club of St. Louis, $300, for the Scholarship of the Harvard Club of St. Louis for 1907–08.

From the Harvard Club of San Francisco, $400, for the Scholarship of the Harvard Club of San Francisco for 1907–08.

From members of the Harvard Engineering Society of New York, $600, the first instalment of the "Student Fund of the Harvard Engineering Society of New York," to be loaned to students of engineering who are unable to meet the expenses of the summer courses in surveying, shop-work, and mining.

From friends, in memory of Henry Weidemann Locke, S.B. 1902, $100, for a scholarship for 1907–08 in Electrical Engineering in the Graduate School of Applied Science.

From the Boston Newsboys' Protective Union, $50, to be added to the income of the Boston Newsboys' Scholarship Fund, so that the holder in 1907–08 should receive the full annual stipend of $150.

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From Edward Dyer Peters, $250, his second gift of like amount, for a Scholarship in Mining and Metallurgy in the Graduate School of Applied Science for the year 1908–09.

From Jeremiah Smith, $750 additional, to be used for aid to students as Scholarship Money Returned in the Law School is used.

For the purchase of books for the College Library, from

| | |
|---|---|
| Anonymous | $24.30 |
| Anonymous, for books on Algiers | 20.00 |
| Anonymous, for books on Dutch History, to be added to the John Lothrop Motley Collection | 232.41 |
| Anonymous, for books on Oceanic Linguistics | 25.00 |
| Francis R. Appleton, William Cary Sanger, for a manuscript relating to Harvard College | 25.00<br>50.00 |
| Miss Hester Bancroft, for books on Japan | 500.00 |
| Thomas P. Beal, Arthur T. Lyman, Robert Winsor, for periodicals on Banking | 10.00<br>13.00<br>20.00 |
| Lawrence S. Butler, for books on Paris | 100.00 |
| A. C. Coolidge, for books on French History, German History, India, and other subjects | 1,717.59 |
| H. J. Coolidge, for books on China | 50.00 |
| James F. Curtis, for books on the History of the Western States | 100.00 |
| In memory of Arthur Sturgis Dixey, of the Class of 1902, from his parents and friends, for French Literature | 1,500.00 |
| Ellis L. Dresel, for books on German Drama | 50.00 |
| G. L. Kittredge, for books illustrating the History of Witchcraft | 30.00 |
| James Loeb, for "Labor Periodicals" | 100.00 |
| Edwin Stanton Mullins | 50.00 |
| Horace B. Stanton, for the Molière Collection | 25.00 |
| Frank Graham Thomson, for English Literature | 200.00 |
| Edgar H. Wells, for English Literature of the Seventeenth and Eighteenth Centuries | 69.90 |
| | $4,912.20 |

From Mrs. George A. Nickerson, $200, her fifth yearly gift in memory of her husband, George Augustus Nickerson, A.B. 1876, LL.B. 1879, for the purchase of books on folk-lore, for the College Library.

From Mrs. Edward D. Brandegee, $484.10, for expenses in connection with her gift of the books of the Bowie Library to the College as a memorial to William Fletcher Weld.

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To purchase for the College Library the "Paul Revere engraving of Harvard College," only two other copies of which are known to exist, from

| | |
|---|---|
| Francis R. Appleton | $100 |
| James B. Ayer | 100 |
| Ezra H. Baker | 100 |
| Henry W. Cunningham | 100 |
| William Endicott, Jr. | 100 |
| Frederick L. Gay | 100 |
| Grenville H. Norcross | 100 |
| | $700 |

For the purchase of books on foreign missions, from

| | |
|---|---|
| Mrs. J. Scott Boyd, Jr. | $15 |
| Mrs. David R. Craig | 5 |
| Gates D. Fahnestock | 5 |
| Mrs. Francis C. Lowell | 10 |
| Mrs. S. V. R. Thayer | 10 |
| Herbert A. Wilder | 10 |
| | $55 |

From an anonymous giver, $50, for the purchase of books for the Psychological Laboratory.

From members of the Division of Philosophy, $110, for the purchase of books for the Library of Philosophy in Emerson Hall.

From Archibald Cary Coolidge, $1,300, for the payment of a salary in the College Library for 1907–08.

From Howard P. Arnold, $110 additional, towards special equipment for the College Library.

From the Rose Bindery, $100, for lectures on book-binding given by Mr. Cobden-Sanderson.

From Edward King, $1,000, towards the expense of organizing the Graduate School of Business Administration.

Towards the current expenses of the Graduate School of Business Administration, from

| | |
|---|---|
| Arthur T. Lyman | $500 |
| Members of the Class of 1879 | 200 |
| | $700 |

From the Society for Promoting Theological Education, $1,510.71, "for the purchase of books for the Library of the Divinity School and for the administration of said Library."

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From Isidor Straus, $1,000, for expenses connected with explorations in Palestine.

From Mrs. Schuyler Van Rensselaer, $100, for the Museum of Classical Archaeology.

From Charles Allerton Coolidge, $300, to be added to the appropriation for the Department of Architecture.

For the botanical exploration of Western China, begun in 1906 by Ernest Henry Wilson, on behalf of the Arnold Arboretum, from

| | |
|---|---|
| Anonymous | $1,000 |
| Sir John Stirling Maxwell | 971 |
| Mrs. Bayard Thayer | 1,000 |
| Miss Willmott | 973 |
| | $3,944 |

From Miss Abby A. Bradley, $1,200, to be added to the income of the William L. Bradley Fund for the Arnold Arboretum.

From the Massachusetts Society for Promoting Agriculture, $2,000, "to be expended at the Arnold Arboretum by the Director, to increase the knowledge of trees."

From Francis Skinner, $2,500, for the purchase of books for the Arnold Arboretum in memory of his father, Francis Skinner, of the Class of 1862.

From Charles E. Stratton, $200, for expenses, including construction, at the Arnold Arboretum.

From John E. Thayer, $500, for the Bermuda Biological Station for Research.

From Stephen M. Weld, $1,000, for use in the reorganization and work of the Bussey Institution.

For a collection of American Woods for the Division of Forestry, from

| | |
|---|---|
| James F. Curtis | $25 |
| Charles Jackson | 20 |
| Henry James, Jr. | 25 |
| John Forbes Perkins | 15 |
| G. Frederick Schwarz | 15 |
| | $100 |

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From John S. Ames, $60,000, for the purchase of 1788 acres of woodland in Petersham, Mass., and for the repair and equipment of the buildings, for the Division of Forestry.

For the Botanic Garden, from

| | |
|---|---|
| Anonymous | $1,100 |
| Anonymous | 1,000 |
| Arthur F. Estabrook | 1,000 |
| Nathaniel C. Nash | 500 |
| | $3,600 |

For the Gray Herbarium, from

| | | | |
|---|---|---|---|
| R. L. Agassiz | $10 | Amount brought forward | $905 |
| Thomas Allen | 10 | Edward S. Dodge | 15 |
| James Barr Ames | 10 | William Endicott | 10 |
| Miss Mary S. Ames | 10 | J. S. Fay, Jr. | 25 |
| Anonymous | 500 | S. W. Fletcher | 10 |
| Anonymous | 25 | Mrs. William H. Forbes | 5 |
| Anonymous | 25 | Francis A. Foster | 10 |
| Howard P. Arnold | 25 | Francis C. Foster | 10 |
| Walter C. Baylies | 10 | Mrs. Francis C. Foster | 10 |
| Thomas P. Beal | 10 | Miss Harriet E. Freeman | 10 |
| A. C. Bent | 10 | Miss Cornelia Anne French | 10 |
| Mrs. A. W. Blake | 10 | Robert H. Gardiner | 10 |
| W. P. Blake | 10 | George A. Goddard | 10 |
| James C. Braman | 5 | Miss Harriet Gray | 10 |
| Mrs. J. L. Bremer | 10 | Mrs. Henry S. Grew | 10 |
| Miss Sarah F. Bremer | 10 | Edward Everett Hale | 10 |
| William Brewster | 10 | Mrs. Augustus Hemenway | 10 |
| Addison Brown | 10 | Miss Clara Hemenway | 10 |
| Harold H. Brown | 10 | Miss Annie P. Henchman | 10 |
| Stephen Bullard | 10 | J. P. B. Henshaw | 10 |
| Mrs. William S. Bullard | 10 | T. W. Higginson | 10 |
| Allston Burr | 10 | Miss Rose Hollingsworth | 3 |
| In memory of F. H. C. | 10 | Robert C. Hooper | 10 |
| Mrs. James B. Case | 10 | Miss Katharine Horsford | 25 |
| Horace D. Chapin | 10 | Clement S. Houghton | 10 |
| Charles F. Choate | 10 | Henry S. Howe | 10 |
| Miss Louise H. Coburn | 10 | Mrs. John E. Hudson | 5 |
| Mrs. J. M. Codman | 10 | H. S. Hunnewell | 10 |
| Miss Helen Collamore | 10 | Walter Hunnewell | 10 |
| George G. Crocker | 10 | Bernard Jenney | 5 |
| Mrs. Charles P. Curtis | 10 | Edward C. Johnson | 10 |
| Henry P. Curtis | 10 | F. L. Kennedy | 10 |
| Samuel B. Dana | 10 | G. G. Kennedy | 50 |
| Frank A. Day | 25 | Charles A. Kidder | 10 |
| Walter Deane | 10 | Mr. and Mrs. David P. Kimball | 20 |
| George Dexter | 10 | The Misses Kimball | 10 |
| Amount carried forward | $905 | Amount carried forward | $1,318 |

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FOR THE GRAY HERBARIUM (*continued*).

| | |
|---|---|
| Amount brought forward | $1,318 |
| Mrs. H. M. Laughlin | 10 |
| E. D. Leavitt | 10 |
| George C. Lee | 10 |
| George V. Leverett | 25 |
| Mrs. George Linder | 10 |
| Miss Louisa P. Loring | 10 |
| William Caleb Loring | 10 |
| Mrs. Ellen Loring | 10 |
| Miss Katharine P. Loring | 10 |
| Mrs. T. K. Lothrop | 10 |
| Mrs. George G. Lowell | 10 |
| Arthur T. Lyman | 10 |
| Haslett McKim | 10 |
| Mrs. Gilbert N. McMillan | 10 |
| Miss Ellen F. Mason | 10 |
| Miss Susan Minns | 25 |
| Mrs. Samuel Torrey Morse | 10 |
| Nathaniel C. Nash | 10 |
| Grenville H. Norcross | 10 |
| Mrs. Otis Norcross, Jr. | 10 |
| Miss Mary R. Peabody | 10 |
| Mrs. J. C. Phillips | 10 |
| Mrs. D. L. Pickman | 10 |
| David Pingree | 10 |
| Laban Pratt | 10 |
| Miss Elizabeth C. Putnam | 5 |
| Mr. and Mrs. George Putnam | 10 |
| Miss Sarah E. Read | 10 |
| Amount carried forward | $1,623 |

| | |
|---|---|
| Amount brought forward | $1,623 |
| Mrs. William H. Reed | 10 |
| George E. Richards | 10 |
| William L. Richardson | 25 |
| Denman W. Ross | 10 |
| Mrs. M. Denman Ross | 10 |
| Mrs. Waldo O. Ross | 10 |
| J. E. Rothwell | 20 |
| Mrs. R. S. Russell | 10 |
| Mrs. J. M. Sears | 10 |
| Mrs. K. W. Sears | 10 |
| Mrs. G. H. Shaw | 20 |
| Mrs. Q. A. Shaw | 20 |
| David N. Skillings | 10 |
| Francis Skinner | 10 |
| F. P. Sprague | 10 |
| Benjamin Vaughan | 10 |
| Miss Cornelia Warren | 10 |
| Benjamin M. Watson | 10 |
| S. M. Weld | 10 |
| Mrs. Charles T. White | 10 |
| George R. White | 300 |
| S. B. Whiting | 10 |
| George Wigglesworth | 10 |
| Miss Adelia C. Williams | 10 |
| John D. Williams | 20 |
| Moses Williams | 10 |
| Miss Mary Woodman | 10 |
| | $2,238 |

Towards a fund for the erection of a building for the Germanic Museum, from

| | |
|---|---|
| Henry Bartholomay, Jr. | $100 |
| G. W. Garrels | 100 |
| R. M. Haan | 250 |
| | $450 |

From an anonymous friend, $3,884.62, to meet the deficit in the account of the dining-room for the Summer School in 1907.

To found a summer course in practical mining, $3,000, to be divided approximately as follows: $1,000 for the equipment of a building and for the purchase of mining machinery,

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$1,000 for current expenses in the summer of 1908, and $1,000 for current expenses in the summer of 1909, from

| | |
|---|---|
| Alexander Agassiz. | F. W. Hunnewell. |
| Davenport Brown. | Hollis H. Hunnewell. |
| F. A. Eustis. | Quincy A. Shaw. |
| John Hays Hammond. | Quincy A. Shaw, Jr. |
| F. L. Higginson. | H. L. Smyth. |
| H. L. Higginson. | J. J. Storrow. |
| A. F. Holden. | B. B. Thayer. |

For the use of the Division of Music, from

| | |
|---|---|
| Percy L. Atherton | $30 |
| W. K. Brice | 50 |
| Edward S. Dodge | 25 |
| Charles Peabody | 10 |
| Philip L. Spalding | 35 |
| | $150 |

From an anonymous giver, $15,000, to be used for the decoration of the front of Nelson Robinson Jr. Hall.

From an anonymous giver, $2,500 additional, for the equipment of Nelson Robinson Jr. Hall.

Through the Committee on the Shaler Portrait, $215, being the unused balance of gifts, to be applied towards the cost of the Shaler Memorial Tablet.

From an anonymous giver, $500, for the Department of Social Ethics, to be spent under the direction of Professor Francis G. Peabody.

From Joseph Lee, $750, for the School for Social Workers.

From Mrs. Alexander Cochrane, $100, for a tablet in memory of Dr. Charles Follen Folsom, to be erected in the Administration Building at the Medical School.

From the Harvard Medical Alumni Association, $3,000, to be used to increase the salaries of some of the younger Instructors and Assistants in the Medical School.

From Arthur T. Cabot, $1,000, towards salaries in the Department of Biological Chemistry for 1907–08.

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From Miss Rebecca W. Brown, $200, towards defraying the expenses of the Bulletin of the Buckminster Brown Collection in the Warren Anatomical Museum.

From Charles S. Minot, $122.25, to be used by the Department of Comparative Anatomy for scientific drawings.

From John C. Phillips, $5,000 additional, to be used under the direction of the Shattuck Professor of Pathological Anatomy, the Associate Professor of Pathology and the donor, for work in the Department of Pathology.

From J. F. Bowen, $258.51, for the purchase of a Zeiss microscope for the Department of Pathology.

From Storey and Putnam, Trustees, $600, towards a salary and expenses in the Department of Neuropathology.

From Miss Katherine E. Bullard, $500, for the Department of Neuropathology, either towards the salary of an assistant, or for such other expenses as may be deemed wise.

From an anonymous giver, $250, for the salary of a secretary for the Cancer Commission of Harvard University.

From an anonymous giver, $5,000, for the investigation of cancer under the advice of the Cancer Commission of Harvard University.

From an anonymous giver, $100, for the promotion of research on Diabetes Mellitus.

From John S. Ames, $1,000, to forward original work in the Laboratory of Surgical Research.

From Trustees under the will of Miss Harriet N. Lowell of Boston, Mass., $2,000, the first payment under the following provision of her will: —

"The remaining part of said net income shall during the life of the said . . . be paid in annual payments to the President and Fellows of Harvard College, in Cambridge, in said Commonwealth, to be used by the Medical Department of said College for scientific study and investigation in any department of surgery, and into the cause, treatment, prevention and cure of disease, including dental surgery and pathology, either in this Country or in Europe or wherever such study and investigation may be most advantageously pursued."

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From an anonymous giver, in memory of Dwight M. Clapp, D.M.D. 1882, of Boston, Mass., complete X-ray apparatus purchased by Dr. Shuman for the Dental School, and $40.27, the remainder of $300 placed in his hands for this purchase.

For the purchase of land, the erection of buildings, or the endowment of education and research, for the benefit of the Dental School, from

| | | | |
|---|---|---|---|
| Anonymous | $100.00 | Amount brought forward | $28,435.00 |
| Mr. and Mrs. Larz Anderson | 25,000.00 | Jerome Jones | 100.00 |
| Lyman F. Bigelow | 125.00 | C. M. Keep | 100.00 |
| Charles A. Brackett | 100.00 | The Misses Kimball | 1,000.00 |
| In memory of Dr. Dwight M. Clapp, from | | H. F. Langley | 25.00 |
| Mrs. Alice M. Cary | 2,000.00 | George G. Mitchell | 10.00 |
| Mrs. Dwight M. Clapp | 525.00 | Robert T. Moffatt | 100.00 |
| B. H. Codman | 25.00 | W. Vernon Ryder | 10.00 |
| W. P. Cooke | 125.00 | A. H. Stoddard | 100.00 |
| Miss M. W. Curtis | 25.00 | Mrs. William N. Swift | 500.00 |
| The Misses Emery | 100.00 | Alexander J. Wright | 50.00 |
| J. Arthur Furbish | 10.00 | Forty anonymous givers to the Harvard Dental Alumni Fund | 860.50 |
| Earl Hopkins | 250.00 | | $31,290.50 |
| Albert E. Hulme | 50.00 | | |
| Amount carried forward | $28,435.00 | | |

From Mrs. Henry Draper of New York, an additional sum of $10,000, to be spent by the Director of the Observatory in prosecuting the researches in the photography of stellar spectra with which the late Dr. Henry Draper's name is honorably associated.

From Edward C. Pickering, $3,000 additional, for immediate use at the Observatory.

For the Peabody Museum of American Archaeology and Ethnology, from

| | |
|---|---|
| Mrs. N. E. Baylies | $50 |
| A friend | 100 |
| Clarence B. Moore | 500 |
| | $650 |

From an anonymous giver, $25, for additional copies of reference books in special demand in the library of the Peabody Museum of American Archaeology and Ethnology.

From John B. Stetson, Jr., $100, on account of his offer of $100 a year for five years beginning with 1907–08, for the

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purchase of books and periodicals for the library of the Peabody Museum of American Archaeology and Ethnology.

From the Central American Subscription Fund, $300, towards the salary of an assistant at the library of the Peabody Museum of American Archaeology and Ethnology.

From Elliott C. Lee, $250, for a metal book-stack in the library of the Peabody Museum of American Archaeology and Ethnology.

From an anonymous giver, $200, for binding books and periodicals for the library of the Peabody Museum of American Archaeology and Ethnology.

From an anonymous giver, $15, toward the payment of an assistant at the Peabody Museum of American Archaeology and Ethnology.

From an anonymous giver, $1,200, towards salaries in 1908–09 in the Peabody Museum of American Archaeology and Ethnology.

From an anonymous giver, $1,200, for a Fellowship for two years in the Graduate School of Arts and Sciences, for the study of Central American Archaeology and Ethnology.

Towards the expenses of the South American Expedition undertaken by the Peabody Museum of American Archaeology and Ethnology, from

| | |
|---|---|
| John W. Hastings . . . . . | $450.00 |
| Louis J. de Milhau, on account of his offer of $15,000 . . . . . | 4,999.92 |
| | $5,449.92 |

From the Committee on the Regulation of Athletic Sports, $20,000, to be added to its previous gifts for improvements upon, and additions to, The Soldier's Field, to be made by the Committee, with the approval of the Corporation.

*The total amount of these gifts for immediate use is $241,924.23, as stated also on page 52.*

CHARLES F. ADAMS, 2D, *Treasurer.*

BOSTON, January, 1909.

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# DETAILED STATEMENTS

RECEIPTS AND DISBURSEMENTS (GENERAL STATEMENT)

INVESTMENTS

FUNDS AND BALANCES

RECEIPTS AND PAYMENTS FOR DEPARTMENTS

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*General Statement of Receipts and Disbursements for the year ending*

INCOME

| | | |
|---|---|---|
| Interest on notes, mortgages, advances, &c., | | $103,499.47 |
| Interest on Policies of Mass. Hospital Life Insurance Co., | | 875.54 |
| Interest on Bank Deposits. | | |
| Deposit in American Trust Co., | $64.38 | |
| " City Trust Co., | 921.61 | |
| " Equitable Trust Co., | 434.30 | |
| " Merchants National Bank, | 59.77 | |
| " National Union Bank, | 24.11 | |
| " Old Boston National Bank, | 1,295.27 | 2,799.44 |
| Interest on Public Funds (after deducting $187.38 for sinking premiums). | | |
| City of Boston 3½'s of 1920, | $350.00 | |
| " Providence 4's of 1911, | 80.00 | |
| " " " 1921, | 120.00 | |
| Imperial Japanese 4½'s of 1925, | 767.02 | |
| Massachusetts 3½'s of 1913, | 1,185.25 | |
| " " " 1916, | 154.14 | |
| " " " 1935, | 199.07 | |
| " " " 1936, | 269.79 | |
| " " " 1938, | 129.14 | |
| United States of Mexico 4's of 1954, | 3,920.00 | 7,174.41 |
| Interest on Railroad Bonds (after deducting $5,003.77 for sinking premiums). | | |
| Baltimore & Ohio 4's, | $4,000.00 | |
| " " (P. L. E. & W. V. system) Ref. 4's, | 4,000.00 | |
| " " So. Western 3½'s, | 3,500.00 | |
| Bangor & Aroostook Ref. 4's, | 5,000.00 | |
| Burlington & Mo. River in Neb. 6's, | 7,914.00 | |
| Central Vermont 4's, | 1,740.00 | |
| Chicago, Burlington & Quincy 4's, | 120.00 | |
| " " " Ill. Div. 4's, | 7,977.78 | |
| " " " 3½'s, | 15,243.80 | |
| Chicago & No. Western Gen. M. 3½'s, | 3,488.23 | |
| Chicago & Western Indiana Coll. Trust 5's, | 4,986.11 | |
| Chicago, Rock Island & Pacific 4's, | 3,920.90 | |
| Indiana, Illinois & Iowa 4's, | 4,000.00 | |
| Kansas City, Fort Scott & Memphis 6's, | 12,073.89 | |
| Kansas City, Memphis & Birmingham Income 5's, | 5,700.00 | |
| Kansas & Missouri 5's, | 2,700.00 | |
| Lake Shore & Michigan Southern 4's, | 4,000.00 | |
| " " " 3½'s, | 437.50 | |
| Long Island Unified 4's, | 12,000.00 | |
| Louisville & Jeffersonville Bridge 4's, | 8,000.00 | |
| Amounts carried forward, | $110,802.21 | $114,348.86 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

EXPENSES

| | | |
|---|---|---|
| **Paid to account of expenses in the** | | |
| **University**, as per Table I (page 92). | | |
| Salaries, | $45,610.79 | |
| Retiring Allowances, | 33,024.67 | |
| Peabody Museum of American Archaeology and Ethnology (part, see Table XIV, page 148), | 1,411.49 | |
| Semitic Museum (part, see Table XV, page 149), | 1,693.76 | |
| William Hayes Fogg Art Museum (part, see Table XVII, page 151), | 2,495.14 | |
| Appleton Chapel (part, see Table XIX, page 153), | 6,580.32 | |
| Phillips Brooks House (part, see Table XX, page 154), | 1,515.31 | |
| Other expenses, | 52,464.22 | |
| | $144,795.70 | |
| Amount unpaid on term-bills issued before Aug. 1, 1907, | 463.99 | |
| | $145,259.69 | |
| Less amount distributed as University charge (p. 94), | 108,031.22 | |
| | $37,228.47 | |
| University charge (p. 95), | 24,324.13 | $61,552.60 |
| **College**, as per Table II (page 119). | | |
| Salaries for instruction, | $531,481.10 | |
| Sundry salaries, | 16,891.65 | |
| Expenses on College Public Buildings, which are not valued in the Treasurer's books, | 31,641.04 | |
| Expenses on College Dormitories which are not valued in the Treasurer's books, | 37,486.71 | |
| General expenses, | 76,479.07 | |
| Fellowships, | 29,615.00 | |
| Scholarships, | 58,876.00 | |
| Loans and other aid to students, | 30,217.98 | |
| Prizes and expenses, | 3,460.67 | |
| Museum of Comparative Zoölogy (part, see Table XIII, page 146), | 4,077.50 | |
| Jefferson Physical Laboratory (part, see Table XVIII, page 152), | 766.23 | |
| Hemenway Gymnasium (part, see Table XXI, page 155), | 7,458.21 | |
| Summer Schools. | | |
| Payments, $27,900.17 | | |
| University charge, 656.09 | 28,556.26 | |
| Books, from special Funds and gifts, | 2,023.33 | |
| Amounts carried forward, | $853,980.75 | $61,552.60 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*)

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $110,802.21 | $114,348.86 |
| **Interest on Railroad Bonds (*continued*).** | | |
| Minneapolis Union 5's, . . . . . | 4,866.83 | |
| Missouri Pacific 5's, . . . . . | 5,000.00 | |
| Montana Central 6's, . . . . . | 4,859.37 | |
| New York Central & H. R. 3½'s (L. S. & M. S. Coll.), | 10,500.00 | |
| New York Central & H. R. 3½'s (M. C. Coll.), . . | 1,190.00 | |
| New York Central & H. R. (refunding) Gold M. 3½'s, | 35.00 | |
| " " " 5's, . . . . . | 2,479.17 | |
| New York, New Haven & Hartford 4's, . . . . . | 3,875.00 | |
| " " " 3½'s, . . . . . | 911.36 | |
| New York, Ontario & Western 4's, . . . . . | 7,884.13 | |
| Norfolk & Western 1st Con. 4's of 1997, . . . . . | 40.00 | |
| North American 5's, . . . . . | 4,222.22 | |
| Northern Pacific–Great Northern Joint 4's, . . . . | 18,320.00 | |
| Oregon Short Line 5's, . . . . . | 4,583.03 | |
| Oregon Short Line 4's, . . . . . | 4,000.00 | |
| Pennsylvania Co. 3½'s, . . . . . | 2,292.50 | |
| Richmond–Washington Co. 4's, . . . . . | 9,834.05 | |
| St. Louis & San Francisco Ref. 4's, . . . . . | 4.000.00 | |
| St. Paul, Minneapolis & Manitoba 4's, . . . . . | 7,535.91 | |
| Southern Pacific 4's, . . . . . | 4,000.00 | |
| Terminal R. R. Association of St. Louis 4's, . . . | 8,000.00 | |
| Union Pacific 4's, . . . . . | 18,000.00 | |
| Wisconsin Central, Minneapolis Terminal Purchase Money M 3½'s, . . . . . | 1,750.00 | 238,980.78 |
| **Interest on Traction Bonds (after deducting $925.39 for sinking premiums).** | | |
| Boston & Northern 4's, . . . . . | $6,000.00 | |
| Central Crosstown Coll. Trust 5's, . . . . . | 6,250.00 | |
| Interborough Metropolitan Coll. Trust 4½'s, . . . | 13,500.00 | |
| Interborough Rapid Transit 4's, . . . . . | 8,000.00 | |
| " " " 5's, . . . . . | 5,000.00 | |
| Metropolitan West Side Elevated 4's, . . . . . | 4,000.00 | |
| " " " Extension 4's, . | 4,200.00 | |
| Old Colony Street 5's, . . . . . | 6,000.00 | |
| Public Service Corporation of New Jersey 5's, . . | 5,000.00 | |
| Second Avenue 5's, . . . . . | 4,605.26 | |
| Third Avenue 4's, . . . . . | 1,848.51 | |
| United Traction & Electric Co. 5's, . . . . . | 4,563.63 | 68,967.40 |
| **Interest on Sundry Bonds (after deducting $3,611.25 for sinking premiums).** | | |
| American Bell Telephone Co. 4's, . . . . . | $10,162.77 | |
| American Tel. & Tel. Co. 4's, . . . . . | 8,000.00 | |
| Amounts carried forward, . . . | $18,162.77 | $422,297.04 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

EXPENSES (*continued*)

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $853,980.75 | $61,552.60 |
| **College,** as per Table II (*continued*). | | |
| Apparatus and expenses for research, from special Funds and gifts, . . . . . | 4,074.53 | |
| Publications from special Funds and gifts. | | |
| Expenses, . . . . . | 4,189.41 | |
| University charges, . . . . . | 462.20 | |
| Sundry payments from special Funds and gifts, . . | 81,473.44 | |
| Appropriations for collections and laboratories, . . | 49,983.87 | |
| | $994,164.20 | |
| Amount unpaid on term-bills issued before August 1, 1907, . . . . . | 6,050.84 | |
| University charge, . . . . . | 60,202.34 | 1,060,417.38 |
| **Library,** as per Table III (page 125). | | |
| Salaries, . . . . . | $18,500.00 | |
| Services and wages, . . . . . | 22,015.57 | |
| Books, . . . . . | 25,128.56 | |
| Other expenses, . . . . . | 14,657.96 | |
| | $80,302.09 | |
| University charge, . . . . . | 1,863.44 | 82,165.53 |
| **Divinity School,** as per Table IV (page 128). | | |
| Salaries for instruction, . . . . . | $29,556.84 | |
| Scholarships, Exhibitions, and Prizes, . . . . . | 2,241.81 | |
| Divinity Hall, expenses of dormitory, . . . . . | 2,564.90 | |
| Other expenses, . . . . . | 7,612.54 | |
| | $41,976.09 | |
| Amount unpaid on term-bills issued before August 1, 1907, . . . . . | 146.72 | |
| University charge, . . . . . | 2,181.92 | 44,304.73 |
| **Law School,** as per Table V (page 130). | | |
| Salaries for instruction, . . . . . | $56,305.00 | |
| Librarians and assistants, . . . . . | 11,689.91 | |
| Scholarships and loans, . . . . . | 6,349.00 | |
| Other expenses, . . . . . | 38,119.56 | |
| | $112,463.47 | |
| Amount unpaid on term-bills issued before August 1, 1907, . . . . . | 546.29 | |
| University charge, . . . . . | 7,165.07 | 120,174.83 |
| **Medical School,** as per Table VI (page 136). | | |
| Salaries for instruction, . . . . . | $106,366.67 | |
| Fees repaid to Instructors, . . . . . | 11,434.00 | |
| Retiring allowance, . . . . . | 1,000.00 | |
| Fellowships, . . . . . | 3,175.00 | |
| Amounts carried forward, . . . . | $121,975.67 | $1,368,615.07 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*)

| | | |
|---|---|---|
| Amounts brought forward, . . . | $18,162.77 | $422,297.04 |
| Interest on Sundry Bonds (*continued*). | | |
| Boston Electric Light Co. 5's, . . . . . | 4,320.51 | |
| Broadway Realty Co. 5's, . . . . . | 10,332.05 | |
| Butte Water Co. 5's, . . . . . | 250.00 | |
| Chicago Edison Co. 5's, . . . . . | 6,709.60 | |
| Chicago Junc. Railways & Union Stock Yards Co. 5's, | 14,979.85 | |
| Chicago Junc. Railways & Union Stock Yards Co. 4's, | 4,000.00 | |
| Detroit Edison Co. 5's, . . . . . | 4,908.28 | |
| General Electric Conv. Deb. 5's, . . . . . | 4,554.88 | |
| Girard Point Storage Co. 3½'s, . . . . . | 691.52 | |
| Laclede Gas Light Co. 5's, . . . . . | 1,000.00 | |
| Madison River Power 1st M. 5's, . . . . . | 3,930.56 | |
| Metropolitan Tel. & Tel. Co. 5's, . . . . . | 7,500.00 | |
| Mexican Coal & Coke Co. 5's, . . . . . | 300.00 | |
| Minneapolis General Electric Co. 5's, . . . . . | 4,915.26 | |
| Montreal Light, Heat and Power Co. 4½'s, . . . . | 4,466.66 | |
| Municipal Gas & Electric Co. 4½'s, . . . . . | 4,500.00 | |
| New England Tel. & Tel. Co. 5's, . . . . . | 4,058.82 | |
| Portland General Electric Co. 5's, . . . . . | 7,425.00 | |
| Railway & Light Securities Co. 5's, . . . . . | 4,965.90 | |
| St. Louis National Stock Yards Co. 4's, . . . . . | 6,400.00 | |
| Seattle Electric Co. 5's, . . . . . | 7,500.00 | |
| United Electric Securities Co. 5's, . . . . . | 4,473.41 | |
| United States Steel Corporation 5's, . . . . . | 1,600.00 | |
| Washington Water Power 6's, . . . . . | 15.17 | |
| Wood Worsted Mills 4½'s, . . . . . | 2,250.00 | 134,210.24 |
| Dividends on Railroad Stocks. | | |
| Baltimore & Ohio, . . . . . | $4,200.00 | |
| Boston & Albany, . . . . . | 225.00 | |
| Boston & Lowell, . . . . . | 2,880.00 | |
| Canadian Pacific, . . . . . | 87.50 | |
| Chicago, Milwaukee & St. Paul, . . . . . | 7,245.00 | |
| Chicago & Northwestern, . . . . . | 11,375.00 | |
| Fitchburg, preferred, . . . . . | 1,185.00 | |
| Great Northern, preferred, . . . . . | 8,457.50 | |
| Louisville & Nashville, . . . . . | 4,800.00 | |
| Manhattan, . . . . . | 4,900.00 | |
| New York Central & Hudson River, . . . . . | 9,306.00 | |
| New York, New Haven & Hartford, . . . . . | 3,344.00 | |
| Northern (N. H.), . . . . . | 1,740.00 | |
| Northern Pacific, . . . . . | 5,250.00 | |
| Old Colony, . . . . . | 2,485.00 | |
| Pennsylvania, . . . . . | 17,803.50 | |
| West End Street, preferred, . . . . . | 208.00 | 85,491.50 |
| Amount carried forward, . . . . . | | $641,998.78 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

EXPENSES (*continued*)

| | | |
|---|---|---|
| Amounts brought forward, . . . | $121,975.67 | $1,368,615.07 |
| **Medical School,** as per Table VI (*continued*). | | |
| Scholarships, . . . . . | 4,713.75 | |
| Prize and expenses, . . . . . | 87.50 | |
| **Warren** Anatomical Museum, . . . . . | 1,627.93 | |
| Sundry payments from special Funds and gifts, . | 17,661.58 | |
| Laboratory appropriations, . . . . . | 22,609.78 | |
| Other expenses, . . . . . | 55,508.30 | |
| | $224,184.51 | |
| Amount unpaid on term-bills issued before August 1, 1907, . . . . . | 759.86 | |
| University charge, . . . . . | 5,583.09 | 230,527.46 |
| **Medical School** Undertaking. See Construction Accounts (pp. 53, 159). | | |
| **Dental School,** as per Table VII (page 138). | | |
| Salaries for instruction, . . . . . | $6,516.00 | |
| Other expenses, . . . . . | 14,286.90 | |
| | $20,802.90 | |
| Amount unpaid on term-bills issued before August 1, 1907, . . . . . | 229.88 | |
| University charge, . . . . . | 612.87 | 21,645.65 |
| **Bussey Institution,** as per Table VIII (page 139). | | |
| Salaries for instruction, . . . . . | $8,400.00 | |
| Other expenses, . . . . . | 11,350.06 | |
| | $19,750.06 | |
| University charge, . . . . . | 378.72 | 20,128.78 |
| **Arnold Arboretum,** as per Table IX (page 140). | | |
| Salaries, . . . . . | $5,750.00 | |
| Books from gifts, . . . . . | 4,505.23 | |
| Other expenses, . . . . . | 23,988.26 | |
| | $34,243.49 | |
| University charge, . . . . . | 474.69 | 34,718.18 |
| **Botanic Garden** and **Botanical Museum,** as per Table X (page 141). | | |
| Services and wages, . . . . . | $3.09 | |
| Labor, . . . . . | 4,942.87 | |
| Other expenses, . . . . . | 4,189.36 | |
| | $9,135.32 | |
| University charge, . . . . . | 149.93 | 9,285.25 |
| Amount carried forward, . . . . . | | $1,684,920.39 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*)

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $641,998.78 |
| **Dividends on Manufacturing and Telephone Stocks.** | | | |
| American Telephone & Telegraph Co., | | $9,520.00 | |
| American Smelters' Securities Co., preferred, | | 10,122.50 | |
| Amoskeag Manufacturing Co., | | 2,400.00 | |
| Edison Electric Illumination Co., | | 5,500.00 | |
| General Electric Co., | | 6,600.00 | |
| Merrimack Manufacturing Co., | | 748.00 | |
| Pacific Mills, | | 3,120.00 | |
| Plymouth Cordage Co., | | 300.00 | 38,310.50 |
| **Dividends on Real Estate Trust Stocks.** | | | |
| Barristers Hall Trust, | | $3,045.00 | |
| Boston Real Estate Trust, | | 1,260.00 | |
| Central Building Trust, | | 100.00 | |
| Department Store Trust, | | 11,250.00 | |
| Devonshire Building Trust, | | 18.00 | |
| Essex Street Trust, | | 4,000.00 | |
| Paddock Building Trust, | | 4,161.50 | |
| Post Office Square Building Trust, | | 3,000.00 | |
| Providence Building Co., | | 8.00 | 26,842.50 |
| **Dividends on Sundry Stocks.** | | | |
| Calumet & Hecla Mining Co., | | $525.00 | |
| Great Northern Iron Ore Properties, | | 1,990.00 | |
| Honolulu Gas Co. L'd, | | 60.00 | |
| Laclede Gas Light Co., preferred, | | 1,000.00 | |
| Manchester Traction Light & Power Co., | | 192.00 | |
| Massachusetts Gas Companies, preferred, | | 6,000.00 | |
| St. Joseph Railway Light, Heat, & Power Co., | | 250.00 | |
| United States Smelting, Refining & Mining Co., | | 700.00 | 10,717.00 |
| **Real Estate Investments, from rents, &c., net receipts.** | | | |
| Cambridge (University Houses and Lands). | | | |
| Gross receipts, | | $44,934.91 | |
| Less Taxes, | $7,288.76 | | |
| Insurance, | 896.00 | | |
| Repairs, improvements, care, &c., | 21,450.59 | 29,635.35 | 15,299.56 |
| Boston (general investments). | | | |
| Gross receipts, | | $270,310.09 | |
| Less Taxes, | $52,310.74 | | |
| Insurance, | 3,277.00 | | |
| Repairs, improvements, care, &c., | 27,857.02 | | |
| Repaid to capital, | 8,157.27 | 91,602.03 | 178,708.06 |
| Amount carried forward, | | | $911,876.40 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

EXPENSES (*continued*)

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $1,684,920.39 |
| **Gray Herbarium,** as per Table XI (page 142). | | | |
| Salaries, | | $5,450.00 | |
| Services and wages, | | 2,889.12 | |
| Other expenses, | | 4,179.79 | |
| | | $12,518.91 | |
| University charge, | | 141.66 | 12,660.57 |
| **Observatory,** as per Table XII (page 144). | | | |
| Salaries, | | $18,200.00 | |
| Services and wages, | | 8,729.29 | |
| Other expenses, | | 34,221.65 | |
| | | $61,150.94 | |
| University charge, | | 2,310.44 | 63,461.38 |
| **Museum of Comparative Zoölogy,** as per Table XIII (page 145). | | | |
| Salaries, | | $11,100.00 | |
| Services and wages, | | 4,797.21 | |
| **Sturgis Hooper** Fund, for salary and expenses, | | 5,128.90 | |
| Other expenses, | | 23,911.59 | |
| | | $44,937.70 | |
| University charge, | | 1,955.21 | |
| | | $46,892.91 | |
| Less | | | |
| University charge, paid from University income (see page 95), | $1,955.21 | | |
| Amount paid from College income (see Table II, page 117), | 4,077.50 | 6,032.71 | 40,860.20 |
| **Peabody Museum of American Archaeology and Ethnology,** as per Table XIV (page 147). | | | |
| **Peabody** Professor Fund, for salary of the **Peabody** Professor and Curator, | | $2,385.60 | |
| Services and wages, | | 2,764.98 | |
| Fellowships and scholarships, | | 2,994.37 | |
| Other expenses, | | 11,630.55 | |
| | | $19,775.50 | |
| Less amount formerly paid from University income, now in University charge below, | | 1,411.49 | |
| | | $18,364.01 | |
| University charge, | | 1,840.57 | |
| | | $20,204.58 | |
| Less amount transferred. | | | |
| To University, | $1,656.52 | | |
| " College, | 184.05 | 1,840.57 | 18,364.01 |
| Amount carried forward, | | | $1,820,266.55 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*)

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $911,876.40 |
| **Real Estate Investments, etc. (*continued*).** | | | |
| Bussey real estate. | | | |
| Gross receipts, | | $66,342.84 | |
| Less Taxes, | $15,926.96 | | |
| Insurance, | 196.51 | | |
| Interest, | 13,850.78 | | |
| Repairs, improvements, care, &c., | 738.27 | | |
| Heat and power, | 4,912.60 | | |
| Repaid to capital, | 1,000.00 | 36,625.12 | 29,717.72 |
| Sundry estates (special investments). | | | |
| Gross receipts, | | $18,234.51 | |
| Less Taxes, | $3,675.13 | | |
| Insurance, | 505.29 | | |
| Interest, | 20.09 | | |
| Repairs, improvements, care, &c., | 2,395.84 | 6,596.35 | 11,638.16 |
| Total net income from investments, | | | $953,232.28 |
| **Receipts from Students.** | | | |
| Tuition fees, regular and additional courses. | | | |
| College, | $443,784.72 | | |
| Divinity School, | 4,915.00 | | |
| Law School, | 105,660.00 | | |
| Medical School, | 65,613.22 | | |
| Dental School, | 8,355.00 | | |
| Bussey Institution, | 3,045.00 | | |
| School for Social Workers, | 63.33 | $631,436.27 | |
| Laboratory fees. | | | |
| College, | $33,952.72 | | |
| Medical School, | 3,290.92 | | |
| Dental School, | 3,555.62 | | |
| Botanic Garden, | 259.65 | 41,058.91 | |
| Examination fees. | | | |
| College. Admission, | $9,373.00 | | |
| Condition, make-up, and advanced standing, | 3,267.00 | | |
| Doctor of Philosophy, | 60.00 | | |
| Medical School, | 105.00 | | |
| Dental School, | 33.00 | 12,838.00 | |
| Graduation fees. | | | |
| College, | $7,420.00 | | |
| Medical School, | 150.00 | 7,570.00 | |
| Matriculation fees, Medical School, | | 485.00 | |
| Amounts carried forward, | | $693,388.18 | $953,232.28 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

EXPENSES (*continued*)

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $1,820,266.55 |
| **Semitic Museum,** as per Table XV (page 148). | | | |
| Curator, | | $500.00 | |
| Collections, | | 2,946.91 | |
| Excavations in Palestine, | | 10,342.80 | |
| Other expenses, | | 1,193.76 | |
| | | $14,983.47 | |
| Less amount formerly paid from University income, now in University charge below, | | 1,693.76 | |
| | | $13,289.71 | |
| University charge, | | 1,796.61 | |
| | | $15,086.32 | |
| Less amount transferred. | | | |
| To University, | $1,257.63 | | |
| " Divinity School, | 538.98 | 1,796.61 | 13,289.71 |
| **Germanic Museum,** as per Table XVI (page 149). | | | |
| Total of payments, | | $1,428.15 | |
| University charge, | | 90.19 | |
| | | $1,518.34 | |
| Less University charge transferred to University, | | 90.19 | 1,428.15 |
| **William Hayes Fogg Art Museum,** as per Table XVII (page 150). | | | |
| Salaries, | | $1,000.00 | |
| Collections, | | 2,298.84 | |
| Other expenses, | | 5,071.38 | |
| | | $8,370.22 | |
| Less amount formerly paid from University income, now in University charge below, | | 2,495.14 | |
| | | $5,875.08 | |
| University charge, | | 2,705.90 | |
| | | $8,580.98 | |
| Less amount transferred. | | | |
| To University, | $270.06 | | |
| " College, | 2,435.84 | 2,705.90 | 5,875.08 |
| **Jefferson Physical Laboratory,** as per Table XVIII (page 152). | | | |
| Expenses of research, paid from Funds and gift, | | $3,155.98 | |
| Other expenses, | | 3,687.58 | |
| | | $6,843.56 | |
| University charge, | | 238.99 | |
| | | $7,082.55 | |
| Less amount paid from College income (see Table II, page 117), | | 766.23 | 6,316.32 |
| Amount carried forward, | | | $1,847,175.81 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*)

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $693,388.18 | $953,232.26 |
| **Receipts from Students (*continued*).** | | | |
| Summer courses. | | | |
| Tuition fees. | | | |
| College, . . . . . | $24,444.50 | | |
| Divinity School, . . . . . | 990.00 | | |
| Medical School, . . . . . | 5,597.65 | | |
| Dental School, . . . . . | 350.00 | 31,382.15 | |
| Registration fees, College, . . . | $1,824.00 | | |
| Auditors' fees, College, . . . . | 1,497.00 | 3,321.00 | |
| Rooms in dormitories. | | | |
| College buildings, . . . . . | $102,031.17 | | |
| Less receipts from students in dormitories belonging to University Houses and Lands account already included in receipts from investments (p. 46), . . . | 17,613.68 | | |
| | $84,417.49 | | |
| Divinity Hall, . . . . . | 2,940.00 | 87,357.49 | |
| Fines for | | | |
| Late registration, . . . . . | $480.00 | | |
| Late payment of dues, . . . . . | 310.00 | | |
| Late return of books, etc., to | | | |
| College Library, . . . . . | 460.59 | | |
| Divinity School, . . . . . | 4.90 | 1,255.49 | |
| Stillman Infirmary. | | | |
| Annual fees, . . . . . | $14,292.00 | | |
| Receipts from patients, . . . . . | 5,596.34 | 19,888.34 | |
| Use of Microscopes. | | | |
| Dental School, . . . . . | $64.00 | | |
| Medical School, . . . . . | 259.00 | 323.00 | |
| Use of lockers, Hemenway Gymnasium, . . . . . | | 2,188.00 | |
| Summer School excursions, surplus, . . . . . | | 91.20 | |
| Unredeemed Locker deposits Law School, . . . . | | 119.00 | |
| Total receipts from students (excluding receipts from University Houses and Lands deducted above), . . . . . | | | 839,313.85 |
| [The total *net* receipts from students (excluding receipts from University Houses and Lands deducted above) were:— | | | |
| Above total, . . . . . | | $839,313.85 | |
| Less expenses of | | | |
| College Dormitories (p. 41), . . | $37,436.71 | | |
| Divinity Hall (p. 43), . . . . . | 2,564.90 | 40,001.61 | |
| | | $799,312.24] | |
| Amount carried forward, . . . . . | | | $1,792,546.13 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

EXPENSES (*continued*)

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $1,847,175.81 |
| **Appleton Chapel,** as per Table XIX (page 153). | | | |
| Salaries, | | $5,774.65 | |
| Choir, | | 1,600.00 | |
| Other expenses, | | 1,782.89 | |
| | | $9,157.54 | |
| Less amount formerly paid from University income, now in University charge below, | | 6,580.32 | |
| | | $2,577.22 | |
| University charge, | | 6,713.39 | |
| | | $9,290.61 | |
| Less amount transferred. | | | |
| To University, | $1,342.68 | | |
| " College, | 5,370.71 | 6,713.39 | 2,577.22 |
| **Phillips Brooks House,** as per Table XX (page 154). | | | |
| Salaries, | | $500.00 | |
| Other expenses, | | 2,720.35 | |
| | | $3,220.35 | |
| Less amount formerly paid from University income, now in University charge below, | | 1,515.31 | |
| | | $1,705.04 | |
| University charge, | | 1,616.78 | |
| | | $3,321.82 | |
| Less amount transferred. | | | |
| To University, | $161.78 | | |
| " College, | 1,151.72 | | |
| " Divinity School, | 12.48 | | |
| " Law School, | 290.80 | 1,616.78 | 1,705.04 |
| **Hemenway Gymnasium,** as per Table XXI (page 155). | | | |
| Salaries, | | $5,000.00 | |
| Other expenses, | | 6,634.48 | |
| | | $11,634.48 | |
| University charge, | | 277.45 | |
| | | $11,911.93 | |
| Less amount transferred. | | | |
| To College, | $7,677.81 | | |
| " Divinity School, | 83.67 | | |
| " Law School, | 1,932.45 | 9,693.93 | 2,218.00 |
| **Stillman Infirmary,** as per Table XXII (page 156). | | | |
| Services and wages, | | $7,534.44 | |
| Food and supplies, | | 7,765.75 | |
| Other expenses, | | 7,509.13 | |
| | | $22,809.32 | |
| University charge | | 1,205.35 | 24,014.67 |
| Amount carried forward, | | | $1,877,690.74 |

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*General Statement of Receipts and Disbursements for the year ending*

INCOME (*continued*)

| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $1,792,546.13 |
| **Sundries.** | | |
| Estate of **George H. Emerson**, from Trustee, | $159.80 | |
| **Asa Gray's** copyrights, . . . . . | 799.33 | |
| Estate of **Edward Hopkins**, from Trustees, . | 221.86 | |
| Professorship of Hygiene, from Trustees, . . . . | 1,251.63 | |
| Trustees of Sturgis Fund, for printing Annals of the Observatory, . . . . . | 2,628.78 | |
| Rent of Stoughton Pasture, . . . . . | 100.00 | |
| Sale of grass, wood, old material, &c., . . . . . | 5,286.22 | |
| " tickets to Commencement Lunch, . . . . | 314.00 | |
| " tickets to Divinity School Alumni Dinner, . | 49.00 | |
| " old examination papers, . . . . . | 461.75 | |
| " books, pamphlets, catalogues, &c., . . . . | 8,418.31 | |
| " slides and photographs, . . . . . | 221.21 | |
| Board of horses, cattle, &c., at **Bussey** Institution, | 6,258.54 | |
| Use of Library by resident graduates and others, . | 100.00 | |
| " Gymnasium by graduates, . . . . . | 30.00 | |
| " Buildings (not Univ. Houses and Lands), . | 6,470.02 | |
| For assistance given by Department of Architecture, | 115.35 | |
| From instructors in the Medical School to pay for advertising summer courses, . . . . . | 270.00 | |
| Fees in Infirmary, Dental School, . . . . . | 4,724.33 | |
| **Mary L. Whitney** Scholarship, from the Executor of the will of **C. L. B. Whitney**, . . . . | 32.50 | |
| Engineering camp at Squam Lake, . . . . . | 9,288.27 | |
| Summer School Mining Camp, . . . . . | 825.00 | |
| Insurance awards for loss on property not held as an investment, . . . . . | 346.30 | |
| Loan in place of income for research in Physics, | 2,500.00 | |
| Heat to the Carnegie Nutrition Laboratory, . . . | 231.25 | |
| Heat and power to the House of the Good Samaritan, . . . . . | 3,253.22 | |
| For instruments lost by students in Forestry, . . . | 21.00 | |
| Rebate on purchases by Publication Office, . . . . | 52.24 | 54,429.91 |
| Total amount of income, excluding gifts, . . . . . | | $1,846,976.04 |
| **Gifts for immediate use** (see page 38), . . . . . | | 241,924.23 |
| Amount carried forward, . . . . . | | $2,088,900.27 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

EXPENSES (*continued*)

| | | |
|---|---|---|
| Amount brought forward, | | $1,877,690.74 |
| **Annuities from the following Funds.** | | |
| Advancement of Astronomical Science (1901), | $2,395.00 | |
| " " " " (1902), | 773.72 | |
| **Bussey** Trust, | 4,000.00 | |
| **Caroline Brewer Croft,** | 2,204.00 | |
| **Gurney,** | 532.60 | |
| **Henry S. Nourse,** | 1,000.00 | |
| Professorship of Hygiene, | 4,378.26 | |
| **James Skillen** Memorial, | 800.00 | |
| **George Smith,** | 900.00 | |
| **Alexander W. Thayer,** | 480.00 | |
| **Charles Wilder,** | 1,916.00 | 19,379.58 |
| **Class Funds.** | | |
| **Class of 1844** (expenses), | $49.09 | |
| Paid the Secretary of the **Class of 1853,** | 153.66 | |
| Paid the Secretary of the **Class of 1856,** | 385.68 | 588.43 |
| **Sundry payments.** | | |
| **Daniel A. Buckley,** taxes on real estate, | $ .80 | |
| **Bussey** Trust, expenses, | 25.00 | |
| Gifts for Cuban Teachers, expenses, | 52.00 | |
| **Calvin** and **Lucy Ellis** Fund, taxes, | 93.16 | |
| **George H. Emerson** Scholarship Fund. | | |
| Taxes, $84.35 | | |
| Repairs, 76.50 | | |
| Insurance, 18.75 | 179.60 | |
| **Charles L. Hancock** Fund, taxes on Chelsea real estate, | 35.36 | |
| **Henry S. Nourse** Fund, expenses, | 6.00 | |
| **Stoughton** Scholarship Fund, taxes, | 19.59 | |
| **Daniel Williams** Fund, for the benefit of the Mashpee and Herring Pond Indians, | 545.53 | |
| **Sarah Winslow** Fund, to the Minister and the Teacher at Tyngsborough, Mass., | 229.46 | |
| Woodland Hill Fund, taxes on Muddy River land, and other expenses, | 1,648.08 | 2,834.53 |
| **Construction Accounts.** | | |
| Antitoxin Stable, | $19,772.27 | |
| **Calvin** and **Lucy Ellis** Fund, roadway construction on its property in Bar Harbor, Maine, | 448.13 | |
| Addition to **Gore** Hall (for the Library), | 24,608.85 | |
| **Langdell** Hall (for the Law School), | 113,356.51 | |
| Medical School Undertaking. | | |
| Construction, $49,062.84 | | |
| Other expenses, 7,366.90 | 56,429.74 | |
| Stadium, interest on advances, | 1,244.11 | 215,859.61 |
| Total amount of expenses carried forward, | | $2,116,352.89 |

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*General Statement of Receipts and Disbursements for the year ending*

Amount brought forward, . . . . . $2,088,900.27

## RECEIPTS EXCLUSIVE OF INCOME

### GIFTS FOR CAPITAL ACCOUNT

| | | |
|---|---|---|
| **Arnold** Arboretum Fund (additional), . . . . . | $975.00 | |
| **Edward M. Barringer** Fund (additional), . . | 4,758.86 | |
| **George Newhall Clark** Fund, . . . . . | 10,000.00 | |
| Fund of the **Class of 1842**, . . . . . | 100.95 | |
| Twenty-fifth Anniversary Fund of the **Class of 1881** (additional), . . . . . | 9,055.03 | |
| Fund of the **Class of 1882** (additional), . . . . | 15,676.20 | |
| **Class of 1883** Fund, . . . . . | 80,510.63 | |
| **Class of 1883** Special Fund, . . . . . | 250.00 | |
| **Charles Follen Folsom** Memorial Fund, . . | 11,818.64 | |
| **Asa Gray** Memorial Fund (additional), . . . . . | 100.00 | |
| **Priscilla Clark Hodges** Scholarship Fund, . | 4,000.00 | |
| **John Homans** Memorial Fund (additional), . . | 516.75 | |
| **Arthur T. Lyman** Fund (additional), . . . . | 25,000.00 | |
| **Harvard** Medical Alumni Fund (additional), . . | 1,500.00 | |
| Boston Newsboys' Scholarship Fund (additional), . | 245.74 | |
| **Francis Parkman** Memorial Fund, . . . . . | 5,925.96 | |
| **Sarah E. Potter** Endowment Fund (additional), | 139,204.68 | |
| Riverside Fund (additional), . . . . . | 5,000.00 | |
| **Mary P. Ropes** Fund, . . . . . | 47,576.87 | |
| **Shaler** Memorial Fund (additional), . . . . . | 89.40 | |
| Teachers' Endowment Fund (additional), . . . . . | 61,542.82 | |
| **Jerome Wheelock** Fund (additional), . . . . | 10.00 | |
| **Maria Whitney** Fund, . . . . . | 5,000.00 | |
| **Emperor William** Fund (additional), . . . . | 50.00 | |
| Professorship of Hygiene (1908) Fund, . . . . . | 20,915.00 | |
| | $449,822.53 | |
| German Professorship Fund (additional) (returned during the year to the givers, see p. 59) . . . . . | 150.00 | 449,972.53 |

### SALES, ETC., GENERAL INVESTMENTS.

| | | |
|---|---|---|
| $200,000 American Bell Tel. Co. 4's paid at par, . | $200,000.00 | |
| 42,400 Burlington & Mo. River (in Neb.) non-ex. 6's of 1918, called and paid at par, . | 42,400.00 | |
| 200,000 Interborough Rapid Transit Co. 4% Gold Notes of 1908, . . . . . | 195,299.38 | |
| 100,000 Missouri Pacific 5% Notes of 1908, . . . | 100,000.00 | |
| 7,000 Pennsylvania Co. 3½'s of 1916, called and paid at par, . . . . . | 7,000.00 | |
| 78,000 Third Ave., N. Y., 1st Consol. M. 4's, . . | 71,291.25 | |
| Amounts carried forward, . . . | $615,990.63 | $2,538,872.80 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

Amount brought forward, . . . . . $2,116,352.89

## INVESTMENTS AND SUNDRY PAYMENTS

### GENERAL INVESTMENTS

| | | | |
|---|---|---|---|
| $100,000 | Chicago Burl. & Quincy Gen. M. 4's of 1958, | $95,500.00 | |
| 143,000 | General Electric Co. Conv. Deb. 5's of 1917, | 93,399.25 | |
| 200,000 | Interborough Rapid Transit Co. Conv. 6% Gold Notes of 1911 . . . . . | 195,299.38 | |
| 100,000 | Interborough-Metropolitan Co. Coll. Trust 4½'s of 1956, . . . . . | 63,782.50 | |
| 50,000 | New York, New Haven & Hartford Conv. 3½'s of 1956 (subscription), . . . . . | 12,500.00 | |
| 25,000 | New York, New Haven & Hartford Conv. Deb. 6's of 1948 (subscription), . . . . . | 12,500.00 | |
| 625 | shares Am. Tel. & Tel. Co. (subscription), . | 31,000.00 | |
| 507 | " Chicago, Mil. & St. Paul, pref'd, . . | 20,280.00 | |
| 253 | " " " " (subscrip.), | 10,120.00 | |
| 382 | " Great Northern, pref'd (subscription), | 17,190.00 | |
| 700 | " General Electric Co., . . . . . | 71,537.50 | |
| 500 | " Northern Pacific, . . . . . | 62,037.50 | 685,146.13 |
| Faneuil Hall Square Estate. Mortgage paid, . . . . . | | | 90,000.00 |
| Advances to **Calvin** and **Lucy Ellis** real estate, . | | $815.62 | |
| " **Harvard** Dining Association. To short period debt, . . . . . | | 931.29 | |
| " Sundry accounts, . . . . . | | 5,950.54 | |
| Invested in notes, . . . . . | | 1,125,000.00 | |
| Accrued interest and expenses on bonds bought, . . . | | 955.56 | 1,133,653.01 |

### SPECIAL INVESTMENTS OF VARIOUS FUNDS

| | | | |
|---|---|---|---|
| Property received for **George Newhall Clark** Fund. 100 shares St. Joseph Railway, Light, Heat, and Power Co., | | | 10,000.00 |
| **Price Greenleaf** Fund. | | | |
| 16 | shares Great Northern, preferred, . . . . . | $720.00 | |
| | Note of Armour & Co., . . . . . | 25,000.00 | |
| | " Arlington Mills, . . . . . | 50,000.00 | |
| | " Massachusetts Cotton Mills, . . . . | 50,000.00 | 125,720.00 |
| Property received for Professorship of Hygiene Fund. | | | |
| $6,000 | New York Central & Hudson River (L. S. & M. S. Coll.) 3½'s of 1998 . . . . . | $4,800.00 | |
| 35 | shares American Smelting & Refining Co., . | 3,115.00 | |
| 50 | " American Tel. & Tel. Co., . . . . . | 5,250.00 | |
| 25 | " Canadian Pacific, . . . . . | 3,750.00 | |
| 40 | " Chicago, Milwaukee & St. Paul, . . . | 4,000.00 | 20,915.00 |

Amount carried forward, . . . . . $4,181,787.03

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*General Statement of Receipts and Disbursements for the year ending*

RECEIPTS EXCLUSIVE OF INCOME (*continued*)

| | | |
|---|---|---|
| Amounts brought forward, . . . | $615,990.63 | $2,538,872.80 |

SALES, ETC., GENERAL INVESTMENTS (*continued*)

| | | |
|---|---|---|
| 55,000 New York City Assessment 4½'s, difference on syndicate purchase and sale, . . . . . | 37.77 | |
| 1½ rights New York, New Haven & Hartford R. R., | 4.23 | |
| Notes paid, . . . . . | 1,040,000.00 | 1,656,032.63 |

SALES, ETC., SPECIAL INVESTMENTS OF VARIOUS FUNDS

**Bussey** Trust.

| | | |
|---|---|---|
| Sale of real estate, . . . . . | | 2,724.89 |

**Price Greenleaf** Fund.

| | | |
|---|---|---|
| $3,000 Burl. & Mo. R. (in Neb.) non-ex. 6's called and paid at par, . . . . . | $3,000.00 | |
| 70,000 American Bell Tel. 4's due and paid at par, | 70,000.00 | |
| Note of Massachusetts Cotton Mills, paid, . | 50,000.00 | 123,000.00 |

**Charles L. Hancock** Bequest.

| | | |
|---|---|---|
| Sale of real estate (part), . . . . . | | 25.00 |

**Sarah E. Potter** Endowment Fund.

| | | |
|---|---|---|
| $25,000 Massachusetts 3½'s of 1936, . . . . . | $23,718.75 | |
| 25,000 Lake Shore & Michigan Southern 3½'s of 1997, . . . . . | 21,718.75 | |
| 16,000 Norfolk & Western New River 6's of 1932, . . . . . | 17,900.00 | |
| 150 shares West End Street R'y, preferred, . . | 14,819.25 | |
| 21 " Pureoxia Co., adjustment in reorganization, . . . . . | 3.00 | 78,159.75 |

**Mary P. Ropes** Fund.

| | | |
|---|---|---|
| 365 shares Boston & Maine, . . . . . | | 47,576.87 |

| | |
|---|---|
| Amount carried forward, . . . . . | $4,446,391.94 |

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*of the Treasurer of Harvard College,*
*July 31, 1907.*

INVESTMENTS AND SUNDRY PAYMENTS (*continued*)

| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $4,181,787.03 |

SPECIAL INVESTMENTS OF VARIOUS FUNDS (*continued*)

| | | |
|---|---|---|
| **Property received for Arthur T. Lyman Fund.** | | |
| Note of Merrimack Manufacturing Co., . . . . . | | 25,000.00 |
| **Property received for Francis Parkman Memorial Fund.** | | |
| $5,000 Louisville & Jeffersonville Bridge 1st M. Gold 4's of 1945, . . . . . | $4,500.00 | |
| 1,000 Washington Water Power Co. 6% Gold Notes of 1911, . . . . . | 1,000.00 | 5,500.00 |
| **Property received for Sarah E. Potter Endowment Fund.** | | |
| $25,000 Lake Shore & Michigan Southern 3½'s of 1997, . . . . . | $21,750.00 | |
| 25,000 Massachusetts 3½'s of 1936, . . . . . | 23,750.00 | |
| 16,000 Norfolk & Western New River 6's of 1932, | 17,922.00 | |
| 100 shares Boston & Albany, . . . . . | 18,500.00 | |
| 6 " Devonshire Building Trust, . . . . . | 300.00 | |
| 32 " Manchester Traction, Light & Power Co., | 3,840.00 | |
| 100 " Massachusetts Electric Cos., pref'd, . | 4,000.00 | |
| 50 " Plymouth Cordage Co., . . . . . | 10,000.00 | |
| 2 " Providence Building Co., . . . . . | 100.00 | |
| 20 " Warren Chambers Trust, . . . . . | 600.00 | |
| 150 " West End Street Railway, pref'd, . . | 14,838.00 | 115,600.00 |
| **Property received for Riverside Fund.** | | |
| 5 shares Harvard Riverside Associates, . . . . . | | 5,000.00 |
| **Property received for Mary P. Ropes Fund.** | | |
| 365 shares Boston & Maine, . . . . . | $47,576.87 | |
| 100 " Chicago, Milwaukee & St. Paul, . . . | 13,087.50 | |
| 200 " Pennsylvania, . . . . . | 11,987.50 | |
| 100 " Northern Pacific, . . . . . | 13,112.50 | 85,764.37 |
| **Property received for Maria Whitney Fund.** | | |
| $2,000 City of Providence 4's of 1911, . . . . . | $2,000.00 | |
| 3,000 " " 4's of 1921, . . . . . | 3,000.00 | 5,000.00 |
| Amount carried forward, . . . . . | | $4,423,651.40 |

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*General Statement of Receipts and Disbursements for the year ending*

RECEIPTS, EXCLUSIVE OF INCOME (*continued*)

| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $4,446,391.94 |
| SUNDRIES | | |
| **Harvard** Dining Association. | | |
| To reduce long period debt, . . . . $7,641.76 | | |
| " short " " . . . . 989.30 | $8,631.06 | |
| **Randall** Hall Association, to reduce debt, . . . . | 1,500.00 | |
| Premiums on bonds, repaid in part, . . . . . | 9,809.60 | |
| Advances, for accrued interest and expenses on bonds, repaid, . . . . . | 2,361.11 | |
| Improvements on **Adams** Estate, repaid in part, . | 3,338.00 | |
| " " **Bussey** Real Estate, repaid in part, | 1,000.00 | |
| " " **Gray** Estate, repaid in part, . . | 4,819.27 | |
| Loans to students, repaid, . . . . . | 3,415.20 | |
| Sundry repayments, . . . . . | 1,860.34 | 36,734.58 |
| Reserved to meet the total amount unpaid on term-bills issued before August 1, 1907, charged off during the year to the Departments in which the bills accrued, . . . . . | | 8,197.58 |

| | | |
|---|---|---|
| **Bursar's** Sundry Accounts. | | |
| Receipts during the year. | | |
| On account of **Harvard** Dining Association, . | $197,306.07 | |
| " **Randall** Hall Association, . . | 86,707.72 | |
| On sundry accounts, . . . . . | 236,446.95 | 520,460.74 |
| Balance, August 1, 1907. | | |
| Cash in American Trust Co., . . . . . | $2,228.97 | |
| " City Trust Co., . . . . . | 80,132.02 | |
| " Equitable Trust Co., . . . . . | 697.65 | |
| " Merchants National Bank, . . . . . | 908.71 | |
| " National Union Bank, . . . . . | 1,547.29 | |
| " Old Boston National Bank, . . . . . | 67,580.93 | |
| " hands of Bursar, . . . . . | 30,232.67 | |
| Term Bills overdue, . . . . . | 58,858.99 | 242,187.23 |
| Total, . . . . . | | $5,253,972.07 |

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*of the Treasurer of Harvard College,*
*July 31, 1908*

INVESTMENTS AND SUNDRY PAYMENTS (*continued*)

| | | |
|---|---|---|
| Amount brought forward, | | $4,423,651.40 |

SUNDRIES

| | | |
|---|---|---|
| Gifts toward the foundation of a chair in German Language and Literature, returned to the givers, with interest. | | |
| Gifts, | $500.00 | |
| Interest, | 19.99 | 519.99 |
| Certain bills for 1906–07 which were charged off, but not paid during that year, | | 150.00 |
| A certain University charge for 1907–08 which is to be repaid, | | 80.29 |

| | | | |
|---|---|---|---|
| Bursar's Sundry Accounts. | | | |
| Payments during the year. | | | |
| On account of Harvard Dining Association, | | $195,971.09 | |
| " Randall Hall Association, | | 87,900.48 | |
| On sundry accounts, | | 234,898.23 | 518,769.80 |
| Balance, July 31, 1908. | | | |
| Cash in American Trust Co., | | $1,508.97 | |
| " City Trust Co., | | 105,657.85 | |
| " Equitable Trust Co., | | 75,741.95 | |
| " Merchants National Bank, | | 6,871.15 | |
| " National Union Bank, | | 571.40 | |
| " Old Boston National Bank, | | 22,808.28 | |
| " hands of Bursar, | | 39,372.05 | |
| Term-bills overdue. | | | |
| Issued before August 1, 1907, | $8,197.58 | | |
| Issued for 1907–08, in | | | |
| January, | 673.89 | | |
| June, | 49,397.47 | 58,268.94 | 310,800.59 |
| Total, | | | $5,253,972.07 |

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## INVESTMENTS

The following account exhibits the state of the property, as entered upon the Treasurer's books, July 31, 1908.

General Investments consist of Funds invested together; Special Investments, of Funds invested separately.

**Special Investments, Summary.** (For details see page 65.)

| | | |
|---|---|---|
| Public Funds, | $69,578.28 | |
| Railroad Bonds, | 370,740.31 | |
| Traction Bonds, | 29,543.75 | |
| Sundry Bonds, | 225,155.52 | |
| Railroad Stocks, | 308,605.37 | |
| Manufacturing and Telephone Stocks, | 27,145.00 | |
| Real Estate Trust Stocks, | 50,663.75 | |
| Sundry Stocks, | 347,547.84 | |
| University Houses and Lands, | 586,287.04 | |
| Bussey Real Estate, | 383,823.82 | |
| Other Real Estate, | 228,822.45 | |
| Mortgages and Notes, | 152,000.00 | |
| Deposits in Massachusetts Hospital Life Ins. Co., | 21,225.00 | |
| Cash in American Trust Co., | 1,508.97 | |
| " " Old Boston National Bank, | 769.05 | $2,803,416.15 |

**General Investments.**

| | | |
|---|---|---|
| Mortgages and Notes. | | |
| Mortgages, | $545,000.00 | |
| Personal Notes, with collateral, | 150,000.00 | |
| Armour & Co.'s Note, | 50,000.00 | |
| Edison Electric Illuminating Co.'s Note, | 50,000.00 | |
| Hamilton Manufacturing Co.'s Note, | 50,000.00 | |
| Hartford Carpet Corporation's Notes, | 100,000.00 | |
| Indian Head Mills of Alabama, Note, | 50,000.00 | |
| Massachusetts Cotton Mills Note, | 50,000.00 | |
| Waltham Watch Co.'s Note, | 50,000.00 | |
| York Manufacturing Co.'s Note, | 50,000.00 | 1,145,000.00 |
| Public Funds. | | |
| £3,500 Imperial Japanese Sterling 4½'s of 1925, | $15,334.55 | |
| $98,000 United States of Mexico 4's of 1954, | 91,250.00 | 106,584.55 |
| Railroad Bonds. | | |
| $100,000 Baltimore & Ohio 1st M. 4's of 1948, | $96,625.00 | |
| 100,000 B. & O. (S. W. Div.) 1st M. 3½'s of 1925, | 89,750.00 | |
| 100,000 Baltimore & Ohio (Pittsburg, Lake Erie & West Virginia) Ref. M. 4's of 1941, | 99,250.00 | |
| 125,000 Bangor & Aroostook Cons. Ref. M. 4's of 1951, | 118,750.00 | |
| 128,000 Burl. & Mo. in Nebr. non-ex. 6's of 1918, | 85,600.00 | |
| 444,000 Chicago, Burl. & Quincy 3½'s of 1949, | 456,143.89 | |
| 100,000 " " Gen. M. 4's of 1958, | 95,500.00 | |
| 200,000 C. B. & Q. (Illinois Div.) 4's of 1949, | 200,911.12 | |
| Amounts carried forward, | $1,242,530.01 | $4,054,900.70 |



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| | | | |
|---|---|---|---|
| | Amounts brought forward, . . | $1,242,530.01 | $4,054,900.70 |
| Railroad Bonds (*continued*). | | | |
| $100,000 | Chicago & No. Western Gen. M. 3½'s of 1987, . . . . . | 100,935.49 | |
| 100,000 | Chicago, Rock Island & Pacific Gen. M. 4's of 1988, . . . . . | 106,288.38 | |
| 100,000 | Chicago Terminal Transfer 1st M. 4's of 1947, . . . . . | 95,772.50 | |
| 100,000 | Chicago & Western Indiana Coll. Trust 5% Notes of 1910, . . . . . | 98,000.00 | |
| 100,000 | Indiana, Ill. & Iowa 1st M. 4's of 1950, | 96,500.00 | |
| 200,000 | Kansas City, Fort Scott & Memphis Cons. M. 6's of 1928, . . . . . | 238,620.70 | |
| 114,000 | Kansas City, Memphis & Birmingham (assented) Income 5's of 1934, . . . | 103,500.00 | |
| 100,000 | Lake Shore & Michigan Southern Deb. 4's of 1928, . . . . . | 95,000.00 | |
| 300,000 | Long Island Unified M. 4's of 1949, . . | 283,257.50 | |
| 200,000 | Louisville & Jeffersonville Bridge Co. 1st M. 4's of 1945, . . . . . | 191,000.00 | |
| 100,000 | Minneapolis Union 1st M. 5's of 1922, . | 101,864.30 | |
| 100,000 | Montana Central 1st M. 6's of 1937, . . | 133,078.11 | |
| 50,000 | New York Central & H. R. 5% Notes of 1910, . . . . . | 49,875.00 | |
| 300,000 | New York Central & H. R. (L. S. & M. S. Coll.) 3½'s of 1998, . . . . . | 294,464.40 | |
| 55,000 | New York, New Haven & Hartford Convertible 3½'s of 1956, . . . . . | 61,654.72 | |
| 25,000 | New York, New Haven & Hartford Convertible Deb. 6's of 1948 (50% paid), | 12,500.00 | |
| 100,000 | New York, New Haven & Hartford Deb. 4's of 1955, . . . . . | 105,875.00 | |
| 200,000 | New York, Ontario & Western Ref. M. 4's of 1992, . . . . . | 209,732.84 | |
| 343,000 | Northern Pacific–Great Northern Joint 4's (C. B. & Q. Coll.) of 1921, . . . | 164,325.92 | |
| 100,000 | Oregon Short Line Cons. 1st M. 5's of 1946, | 115,844.68 | |
| 100,000 | Oregon Short Line Ref. M. 4's of 1929, | 96,875.00 | |
| 62,000 | Pennsylvania Co. 3½'s of 1916, . . . . | 59,875.00 | |
| 250,000 | Richmond–Washington Co. Coll. Trust 4's of 1943, Series C, . . . . . | 255,808.45 | |
| 100,000 | St. Louis & San Francisco Ref. M. 4's of 1951, . . . . . | 97,125.00 | |
| £40,000 | St. Paul, Minneapolis & Manitoba (Pacific Extension) 4's of 1940, . . . . . | 201,032.02 | |
| $100,000 | Southern Pacific 1st Ref. M. 4's of 1955, | 97,062.50 | |
| 200,000 | Terminal R. R. Association of St. Louis Gen. M. Ref. 4's of 1953, . . . . . | 200,000.00 | |
| 400,000 | Union Pacific 1st M. & L. G. 4's of 1947, | 353,114.75 | 5,261,512.27 |
| | Amount carried forward, . . . . . | | $9,316,512.97 |

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| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $9,316,512.97 |
| **Traction Bonds.** | | |
| $150,000 Boston & Northern Street R'y 1st M. Ref. 4's of 1954, . . . . . | $139,000.00 | |
| 100,000 Central Crosstown Coll. Trust 5% Notes of 1909, . . . . . | 99,375.00 | |
| 300,000 Interborough–Metropolitan Coll. Trust 4½'s of 1956, . . . . . | 254,782.50 | |
| 200,000 Interborough Rapid Transit Co. Convertible 6% Gold Notes of 1911, . . | 195,299.38 | |
| 100,000 Interborough Rapid Transit Co. 5% Gold Notes of 1910, . . . . . | 97,250.00 | |
| 100,000 Metrop. West Side Elevated 4's of 1938, | 91,746.25 | |
| 100,000 " " " Ext. M. 4's of 1938, . . . . . | 97,000.00 | |
| 150,000 Old Colony Street R'y 1st M. Ref. 4's of 1954, . . . . . | 139,000.00 | |
| 100,000 Public Service Corporation of New Jersey 5% Coll. Gold Notes of 1909, . | 97,000.00 | |
| 100,000 Second Ave. (N. Y.) Con. M. 5's of 1948, | 115,789.60 | |
| 93,000 Third Avenue (N. Y.) 1st Consol. M. 4's of 2000, . . . . . | 94,052.36 | |
| 100,000 United Traction & Electric Co. 1st M. 5's of 1933, . . . . . | 110,909.08 | 1,531,204.17 |
| **Sundry Bonds.** | | |
| $200,000 American Tel. & Tel. Co. 4's of 1929, . | $196,000.00 | |
| 100,000 Boston Electric Light Co. 1st Cons. M. 5's of 1924, . . . . . | 111,211.53 | |
| 145,000 Broadway Realty Co. Purchase money 1st M. 5's of 1926, . . . . . | 153,949.27 | |
| 140,000 Chicago Edison Co. 1st M. 5's of 1926, . | 145,227.20 | |
| 250,000 Chicago Junction Railways and Union Stock Yards Coll. Trust 5's of 1915, . | 250,141.00 | |
| 100,000 Chicago Junction Railways and Union Stock Yards 4's of 1940, . . . . . | 98,500.00 | |
| 100,000 Detroit Edison Co. 1st M. 5's of 1933, . | 102,247.38 | |
| 143,000 General Electric Co. Convertible Deb. 5's of 1917, . . . . . | 149,336.63 | |
| 100,000 Madison River Power Co. 1st M. 5's of 1935, . . . . . | 85,000.00 | |
| 100,000 Metrop. Tel. & Tel. Co. 1st M. 5's of 1918, | 99,500.00 | |
| 100,000 Minneapolis General Electric Co. Gen. M. 5's of 1934, . . . . . | 102,245.78 | |
| 100,000 Montreal Light, Heat and Power Co. 1st M. Coll. Trust 4½'s of 1932, . . . . . | 100,783.29 | |
| 100,000 Municipal Gas & Electric Co. of Rochester, N. Y., 1st M. 4½'s of 1942, . . . | 100,000.00 | |
| 100,000 New England Tel. & Tel. Co. 5's of 1916, | 107,529.38 | |
| Amounts carried forward, . . . | $1,801,671.46 | $10,847,717.14 |

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|---|---|---|---|
| | Amounts brought forward, . . | $1,801,671.46 | $10,847,717.14 |
| **Sundry Bonds (*continued*).** | | | |
| $100,000 | North American Co. Coll. Trust 5% Notes of 1912, . . . . . | $93,625.00 | |
| 150,000 | Portland Gen'l Elec. 1st M. 5's of 1935, | 152,025.00 | |
| 100,000 | R'y & L't Secur. Coll. Tr. 5's of 1935, | 100,920.50 | |
| 160,000 | St. Louis National Stock Yards Co. 1st M. 4's of 1930, . . . . . | 157,650.00 | |
| 100,000 | Seattle Electric Co. 5% Notes of 1911, | 98,666.67 | |
| 50,000 | United Electric Securities Co. Coll. Trust S. F. 5's of 1935, 22d Series, | 51,280.16 | |
| 50,000 | United Electric Securities Co. Coll. Trust 5's of 1936, 24th Series, . . . | 50,000.00 | |
| 50,000 | Wood Worsted Mills Corp'n 4½% Cons. and Equip. Gold Notes of 1910, . . . | 49,500.00 | 2,555,888.79 |
| **Railroad Stocks.** | | | |
| 700 | shares Baltimore & Ohio, . . . . . | $70,362.50 | |
| 507 | " Chicago, Milwaukee & St. Paul, preferred (subscription 65% paid), . | 32,925.58 | |
| 1015 | " Chicago, Milwaukee & St. Paul, . . | 152,157.50 | |
| 253 | " " " " " (subscription 65% paid), . . . . . | 16,413.44 | |
| 1625 | " Chicago & No. Western, . . . . . | 240,166.25 | |
| 1337 | " Great Northern, preferred, . . . . . | 294,558.56 | |
| 955 | " " " Iron Ore Properties, | ..... | |
| 800 | " Louisville & Nashville, . . . . . | 93,925.00 | |
| 8 | " Louisville Property . . . . . | ..... | |
| 700 | " Manhattan, . . . . . | 92,762.50 | |
| 1665 | " New York Central & Hudson River, . | 108,873.21 | |
| 418 | " New York, New Haven & Hartford, . | 74,689.63 | |
| 1000 | " Northern Pacific, . . . . . | 126,575.00 | |
| 4771 | " Pennsylvania, . . . . . | 309,500.80 | 1,612,909.47 |
| **Manufacturing and Telephone Stocks.** | | | |
| 2000 | shares American Smelters Securities Co. 5% cumulative preferred, Series B, . . | $196,000.00 | |
| 1320 | " American Tel. & Tel. Co., . . . . . | 161,610.52 | |
| 12 | " Amoskeag Manufacturing Co., . . . | 3,654.00 | |
| 1000 | " General Electric Co., . . . . . | 113,575.00 | |
| 187 | " Merrimack Manufacturing Co., . . . | 18,615.10 | |
| 24 | " Pacific Mills, . . . . . | 16,668.29 | 510,122.91 |
| **Real Estate Trust Stocks.** | | | |
| 1000 | shares Barristers Hall, . . . . . | $92,766.00 | |
| 2500 | " Department Store, . . . . . | 220,291.88 | |
| 1000 | " Essex Street, . . . . . | 100,000.00 | |
| 750 | " Kimball Building, . . . . . | 75,000.00 | |
| 1089 | " Paddock Building, . . . . . | 104,363.72 | |
| 1000 | " Post Office Square Building, . . . . | 103,000.00 | 695,421.60 |
| | Amount carried forward, . . . . . | | $16,221,509.91 |

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|---|---|---|
| Amount brought forward, | | $16,221,509.91 |
| **Sundry Stocks.** | | |
| 500 shares Edison Elec. Illum. Co., Boston, Mass., | $101,062.50 | |
| 1500 " Massachusetts Gas Companies, pref'd, | 132,107.00 | 233,169.50 |
| **Real Estate in Boston.** | | |
| Adams Estate, Washington Street, | $268,359.02 | |
| Amory Estate, Franklin Street, | 165,615.81 | |
| Cowdin Estate, Haymarket Square, | 86,000.00 | |
| Estate, 20 and 21 Haymarket Square, | 58,913.52 | |
| Faneuil Hall Square Estate, | 197,047.80 | |
| Gerrish Block, Blackstone and North Streets, | 192,875.75 | |
| Gray Estate, Washington Street, | 968,986.88 | |
| Lowell Estate, Washington Street, | 464,868.91 | |
| Old Boston Music Hall Estate, | 356,611.00 | |
| Townsend Estate, Hawkins Street, | 44,569.49 | |
| Webb Estate, Washington Street, | 164,604.79 | 2,917,952.97 |
| **Sundries.** | | |
| Advances to Botanic Department, | $6,619.49 | |
| " **Uriah A. Boyden** Fund, | 10,606.90 | |
| " **Bussey** Trust, | 347,227.21 | |
| " Classical Publication Fund of the **Class of 1856,** | 2,305.21 | |
| " **Calvin & Lucy Ellis** Real Estate, | 1,217.64 | |
| " Medical School, | 2,639.48 | |
| " **Peabody** Museum of American Archaeology and Ethnology, | 991.35 | |
| " **Stillman** Infirmary, | 2,517.86 | |
| " Woodland Hill Fund, | 3,357.02 | |
| " **Harvard** Dining Association, | 165,595.53 | |
| " **Randall** Hall Association, | 28,202.27 | |
| " Stadium, | 12,263.24 | |
| " Sundry Accounts, | 6,558.27 | 590,091.47 |
| **Term Bills overdue.** | | |
| Issued before August 1, 1907, | $8,197.58 | |
| Issued for 1907–08, in | | |
| January, | 673.89 | |
| June, | 49,397.47 | 58,268.94 |
| Cash in City Trust Co., | $105,657.85 | |
| " Equitable Trust Co., | 75,741.95 | |
| " Merchants National Bank, | 6,871.15 | |
| " National Union Bank, | 571.40 | |
| " Old Boston National Bank, | 22,089.23 | |
| " hands of Bursar, | 39,372.05 | 250,253.63 |
| Total, | | $20,271,246.42 |

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## SPECIAL INVESTMENTS IN DETAIL

Any Fund separately invested, wholly, or in part, except Funds in "University Houses and Lands," is kept so either because the giver restricted its investment, even in some cases having selected the securities, or because the gift establishing the Fund, or adding to it, was received in securities, or in other kinds of property, which have not yet been sold for reinvestment with General Investments.

The Special Investments are summarized on page 60. The Funds separately invested for each Department and the income are as follows: —

| UNIVERSITY | Principal, July 31, 1908. | Income. |
|---|---|---|
| **John W. Carter,** | | |
| University Houses and Lands, . . . . . | $12,500.00 | $326.20 |
| **George B. Dorr,** | | |
| University Houses and Lands, . . . . . | 115,966.56 | 3,026.22 |
| **George Draper,** | | |
| University Houses and Lands, . . . . . | 48,458.50 | 1,264.55 |
| **Robert H. Eddy,** | | |
| University Houses and Lands, . . . . . | 56,787.00 | 1,481.90 |
| **John Davis Williams French,** | | |
| University Houses and Lands, . . . . . | 5,322.09 | 138.88 |
| **John C. Gray,** | | |
| University Houses and Lands, . . . . . | 25,000.00 | 652.39 |
| **Walter Hastings,** | | |
| Real Estate, Sacramento St., Cambridge, . . . . | 20,000.00 | 496.42 |
| Insurance and Guaranty, | | |
| Real Estate, Lucas St., Boston, . . . . . | 4,000.00 | ..... |
| **Joseph Lee,** | | |
| University Houses and Lands, . . . . . | 10,000.00 | 260.96 |
| **Henry S. Nourse** (part), | | |
| 40 shares Missouri Zinc Fields Co., . . . . . | 120.00 | ..... |
| **Francis E. Parker,** | | |
| University Houses and Lands, . . . . . | 113,817.44 | 2,970.14 |
| **Henry L. Pierce** (Residuary) (part), | | |
| University Houses and Lands, . . . . . | 48,435.45 | 1,263.95 |
| **Riverside,** | | |
| 11 shares Harvard Riverside Associates, . . . . . | 11,000.00 | ..... |
| **Henry Villard,** | | |
| University Houses and Lands, . . . . . | 50,000.00 | 1,304.79 |
| **William F. Weld,** | | |
| University Houses and Lands, . . . . . | 100,000.00 | 2,609.58 |
| Amounts carried forward, . . . . . | $621,407.04 | $15,795.98 |



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| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $621,407.04 | $15,795.98 |

COLLEGE

| | | |
|---|---|---|
| **Daniel A. Buckley** (part), | | |
| Real Estate in Cambridge, Mass., . . . . . | 70,223.31 | 8,118.12 |
| " " Deer Isle, Me., . . . . . | 1.00 | ..... |
| **George Newhall Clark,** | | |
| 100 shares St. Joseph R'y, Light, Heat & Power Co., | 10,000.00 | 250.00 |
| **Edward W. Codman** (part), | | |
| $5,000 Kansas City, Fort Scott & Memphis R. R. Cons. M. 6's of 1928, . . . . . | 6,250.00 | 300.00 |
| 5,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 4,816.25 | 200.00 |
| 2 shares Pacific Mills, . . . . . | 4,600.00 | 240.00 |
| 15 " Barristers Hall Trust, . . . . . | 1,085.00 | 45.00 |
| 11 " Boston Real Estate Trust, . . . . . | 13,225.00 | 495.00 |
| 25 " Central Building Trust, . . . . . | 2,375.00 | 100.00 |
| **Edward Erwin Coolidge** Fund, | | |
| 200 shares U. S. Smelting, Refining & Mining Co., | 9,000.00 | 700.00 |
| **T. Jefferson Coolidge,** for Research in Physics, | | |
| 625 shares Massachusetts Electric Cos., cum. pref'd, | 57,500.00 | ..... |
| **Eliot** Professorship (**Jonathan Phillips's** Gift), | | |
| $10,000 City of Boston 3½'s of 1920, . . . . . | 10,000.00 | 350.00 |
| Professorship of Hygiene (part), | | |
| Policy of Mass. Hospital Life Insurance Co., . . | 5,000.00 | 206.25 |
| $16,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 15,681.85 | 640.00 |
| 6,000 New York Central & Hudson River R.R. (L. S. & M. S. Coll.) 3½'s of 1998, . . . . . | 4,800.00 | ..... |
| 35 shares American Smelting & Refining Co., . . | 3,115.00 | 122.50 |
| 50 " American Tel. & Tel. Co., . . . . . | 5,250.00 | 200.00 |
| 25 " Canadian Pacific, . . . . . | 3,750.00 | 87.50 |
| 40 " Chicago, Milwaukee & St. Paul, . . . . | 4,000.00 | 140.00 |
| **Arthur T. Lyman** (part), | | |
| Merrimack Manufacturing Co.'s Note (received late in the year), . . . . . | 25,000.00 | ..... |
| **Charles Eliot Norton** Fellowship, | | |
| $15,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 14,100.00 | 600.00 |
| **George Foster Peabody** Scholarship, | | |
| $6,000 Mexican Coal & Coke Co. 1st M., S. F. 5's of 1926, . . . . . | 4,800.00 | 300.00 |
| Amounts carried forward, . . . . . | $895,979.45 | $28,890.35 |

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|---|---|---|
| Amounts brought forward, . . . . . | $895,979.45 | $28,890.35 |
| **Sarah E. Potter** Fund (part), | | |
| $25,000 L. S. & M. S. 3½'s of 1997 (sold during year), | ..... | 437.50 |
| 25,000 Massachusetts 3½'s of 1936 " " | ..... | 269.79 |
| 100 shares Boston & Albany, . . . . . | 18,500.00 | 225.00 |
| 6 " Devonshire Building Trust, . . . . . | 300.00 | 18.00 |
| 32 " Manchester Traction, Light & Power Co., | 3,840.00 | 192.00 |
| 100 " Massachusetts Electric Cos., cum. pref'd, | 4,000.00 | ..... |
| 50 " Plymouth Cordage Co., . . . . . | 10,000.00 | 300.00 |
| 2 " Providence Building Co., . . . . . | 100.00 | 8.00 |
| 12 " Pureoxia Co., . . . . . | 60.00 | ..... |
| 20 " Warren Chambers Trust, . . . . . | 600.00 | ..... |
| **William Reed** Scholarship, | | |
| $1,000 New York Central & H. R. Gold 3½'s of 1997, | 1,000.00 | 35.00 |
| 1,000 Norfolk and Western Divisional 1st lien & gen. M. 4's of 1944, . . . . . | 1,000.00 | 40.00 |
| 2,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 2,000.00 | 80.00 |
| **Nelson Robinson Jr.** Additional (part), | | |
| 1,750 shares Gauley Coal Land Co. preferred, . . | 175,000.00 | ..... |
| **Mary P. Ropes** (part), | | |
| 100 shares Chicago, Milwaukee & St. Paul, . . . | 13,087.50 | ..... |
| 100 " Northern Pacific, . . . . . | 13,112.50 | ..... |
| 200 " Pennsylvania, . . . . . | 11,987.50 | ..... |
| **Dunlap Smith** Scholarship, | | |
| $5,000 Metropolitan West Side Elevated R. R. Extension M. 4's of 1938, . . . . . | 4,700.00 | 200.00 |
| **Stoughton** Scholarship (part), | | |
| Real Estate in Dorchester, . . . . . | 1,294.30 | ..... |
| Teachers' Endowment (part), | | |
| $5,000 Broadway Realty Co. Purchase Money, 2d M. 5's of 1916, . . . . . | 5,000.00 | 250.00 |
| 50,000 Wisconsin Central, Minneapolis Terminal Purchase Money M. 3½'s of 1950, . . . . . | 50,000.00 | 1,750.00 |
| 10 shares **Harvard** Riverside Associates, . . . . | 10,000.00 | ..... |
| **Wales** Professorship of Sanskrit, | | |
| Real Estate, Cornhill, Boston, . . . . . | 40,000.00 | 1,608.67 |
| **Samuel Ward's** Gift (part), | | |
| **Ward's** (Bumkin) Island, Boston Harbor, . . . | 1.00 | ..... |
| Amounts carried forward, . . . . . | $1,261,562.25 | $34,304.31 |

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|---|---|---|
| Amounts brought forward, . . . . . | $1,261,562.25 | $34,304.31 |
| **LIBRARY** | | |
| **William R. Castle,** | | |
| $1,000 Honolulu Gas Co., Limited, 6's of 1925, . . | 1,000.00 | 60.00 |
| **Francis Parkman** Memorial (part), | | |
| $5,000 Louisville & Jeffersonville Bridge 1st M. Gold 4's of 1945, . . . . . | 4,500.00 | ..... |
| 1,000 Washington Water Power Co. 6% Gold Notes of 1911, . . . . . | 1,000.00 | 15.17 |
| **Ichabod Tucker** (part), | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 5,000.00 | 206.25 |
| **LAW SCHOOL** | | |
| **James Barr Ames** Prize (part), | | |
| Personal Note, . . . . . | 2,000.00 | 160.00 |
| **MEDICAL SCHOOL** | | |
| **Calvin and Lucy Ellis** (part), | | |
| $40,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 26,585.00 | 1,600.00 |
| Real Estate in Boston (half interest in), . . . . . | 22,500.00 | 124.15 |
| Real Estate in Eden, Bar Harbor, Maine, . . . . | 10,000.00 | ..... |
| **George C. Shattuck** (part), | | |
| $25,000 Kansas City, Fort Scott & Memphis R. R. Cons. M. 6's of 1928 ($203.70 deducted from income for sinking premium), . . . . . | 29,074.10 | 1,296.30 |
| **MUSEUM OF COMPARATIVE ZOÖLOGY** | | |
| **Maria Whitney,** | | |
| $2,000 City of Providence 4's of 1911, . . . . . | 2,000.00 | 80.00 |
| 3,000 " " " 1921, . . . . . | 3,000.00 | 120.00 |
| **OBSERVATORY** | | |
| Advancement of Astronomical Science (1902). Throughout the year, until the close, this Fund exceeded its special investment, the excess being invested with the general investments. At the close of the year, payment from the Fund left it less than its special investment below. The difference, $1,028.54, belongs to the general investments. | | |
| $5,000 Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . . | 4,800.00 | 200.00 |
| 15 shares Calumet & Hecla Mining Co., . . . . . | 9,000.00 | 525.00 |
| Amounts carried forward, . . . . | $1,382,021.35 | $38,691.18 |

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| Amounts brought forward, . . . . . | $1,382,021.35 | $38,691.18 |

PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY

| | | |
|---|---|---|
| **Peabody Building** (part), $54,000 Kansas & Missouri R. R. 1st M. 5's of 1922, | 11,512.72 | 622.32 |
| **Peabody Collection** (part), $54,000 Kansas & Missouri R. R. 1st M. 5's of 1922, | 19,218.64 | 1,038.84 |
| **Peabody Professor** (part), $54,000 Kansas & Missouri R. R. 1st M. 5's of 1922, | 19,218.64 | 1,038.84 |
| **Thaw** (part) ($8.48 deducted from income for sinking premium), | | |
| $20,000 Girard Point Storage Co. 1st M. 3½'s of 1940, | 20,271.19 | 691.52 |

ARNOLD ARBORETUM

| | | |
|---|---|---|
| **Robert Charles Billings,** | | |
| $5,000 Butte Water Co. 1st M. 5's of 1921, . . . . | 4,000.00 | 250.00 |

BUSSEY INSTITUTION

| | | |
|---|---|---|
| Woodland Hill, | | |
| Laboratory of Comparative Pathology building, . | 17,301.84 | 1,166.66 |

SPECIAL FUNDS

| | | |
|---|---|---|
| **Bussey** Trust (part), | | |
| Real Estate in Boston, . . . . . | 383,823.82 | 29,717.72 |
| Fund of the **Class of 1834,** | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 1,000.00 | 41.25 |
| Fund of the **Class of 1844,** | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 6,500.00 | 268.13 |
| Fund of the **Class of 1853,** | | |
| Policy of Mass. Hospital Life Insurance Co., . . . | 3,725.00 | 153.66 |
| **Calvin** and **Lucy Ellis** Aid (part), | | |
| Real Estate in Boston (half interest in), . . . . . | 22,500.00 | 124.14 |
| **Charles L. Hancock** Bequest (part), | | |
| Real Estate in Chelsea, . . . . . | 1.00 | ..... |
| **Robert Troup Paine** (accumulating) ($187.38 deducted from income for sinking premiums), | | |
| $38,000 Massachusetts 3½'s of 1913, . . . . . | 38,796.13 | 1,185.25 |
| 5,000 " " 1916, . . . . . | 5,166.84 | 154.14 |
| 6,000 " " 1935, . . . . . | 6,294.98 | 199.07 |
| 4,000 " " 1938, . . . . . | 4,320.33 | 129.14 |
| **George Smith** Bequest (part), | | |
| $10,000 Du Quoin, Ill., Water Works Co. 6's of 1901, . . . . . | 1.00 | ..... |
| 20,000 Laclede Gas Light Co. 5's of 1919, . . . | 20,000.00 | 1,000.00 |
| 32,000 United States Steel Corporation 5's of 1963, | 24,000.00 | 1,600.00 |
| 200 shares Laclede Gas Light Co., preferred, . . | 18,800.00 | 1,000.00 |
| Amounts carried forward, . . . . | $2,008,473.48 | $79,071.86 |

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|---|---|---|---|
| | Amounts brought forward, . . . . | $2,008,473.48 | $79,071.86 |
| **Price Greenleaf.** ($384.53 deducted from income for sinking premiums.) The total amount of this Fund is $794,942.67, which is invested as follows: — | | | |
| $70,000 | American Bell Telephone Co. 4's of 1908 (due and paid at par during the year), . | ..... | 2,671.05 |
| 70,000 | Broadway Realty Co. Purchase money 1st M. 5's of 1926, . . . . . | 73,407.84 | 3,315.80 |
| 13,000 | Burl. & Mo. River R. R. in Nebraska non-exempt 6's of 1918, . . . . . | 13,000.00 | 930.00 |
| 25,000 | Central Crosstown Coll. Trust 5% Notes of 1909, . . . . . | 24,843.75 | 1,250.00 |
| 43,500 | Central Vermont R'y 1st M. 4's of 1920, . | 37,845.00 | 1,740.00 |
| 3,000 | Chicago, Burl. & Quincy R. R. 4's of 1922, | 2,880.00 | 120.00 |
| 50,000 | Chicago Junction Railways & Union Stock Yards Coll. Trust 5's of 1915, . . . . . | 47,000.00 | 2,500.00 |
| 8,000 | Kansas City, Fort Scott & Memphis cons. M. 6's of 1928, . . . . . | 9,427.46 | 408.62 |
| 50,000 | Metropolitan Tel. & Tel. Co. 1st M. 5's of 1918, . . . . . | 49,750.00 | 2,500.00 |
| 34,000 | New York Central & Hudson River R. R. (Michigan Central Collateral) 3½'s of 1998, | 28,412.10 | 1,190.00 |
| 32,000 | Northern Pacific–Great Northern Joint 4's (C. B. & Q. collateral) of 1921, . . . . | 19,993.55 | 1,280.00 |
| 50,000 | Seattle Electric Co. 5% Notes of 1911, . . | 49,333.33 | 2,500.00 |
| 50,000 | Union Pacific R.R. 1st M. & L.G. 4's of 1947, | 44,625.00 | 2,000.00 |
| 25,000 | Note of Armour & Co., . . . . . | 25,000.00 | 395.80 |
| 50,000 | " Arlington Mills (rec'd late in year), | 50,000.00 | ..... |
| 50,000 | " Massachusetts Cotton Mills, . . . | 50,000.00 | 2,890.97 |
| 360 shares | Boston & Lowell R. R., . . . . . | 46,800.00 | 2,880.00 |
| 237 " | Fitchburg R. R., preferred, . . . . . | 22,306.27 | 1,185.00 |
| 56 " | Great Northern, preferred, . . . . . | 13,125.00 | 400.29 |
| 40 " | " " Iron Ore Properties, | ..... | 80.00 |
| 355 " | Old Colony R. R., . . . . . | 63,190.00 | 2,485.00 |
| 27 " | N. Y. Central & Hudson River R. R., . | 2,866.28 | 148.50 |
| 290 " | Northern R. R. (N. H.), . . . . . | 29,290.00 | 1,740.00 |
| 52 " | West End Street Railway, preferred, . | 4,305.56 | 208.00 |
| 34 " | Central Vermont R'y, . . . . . | 428.72 | ..... |
| 707 " | Pennsylvania R. R., . . . . . | 51,856.04 | 2,297.75 |
| 17 " | Boston Real Estate Trust, . . . . . | 22,978.75 | 765.00 |
| 100 " | Paddock Building Trust, . . . . . | 10,000.00 | 350.00 |
| Cash in American Trust Co., . . . . . | | 1,508.97 | 64.38 |
| " " Old Boston National Bank, . . . . . | | 769.05 | ..... |
| | Totals of special investments, . . . | $2,803,416.15 | $117,368.03 |

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## FUNDS AND BALANCES

The foregoing property represents the following Funds and balances, and is answerable for the same.

[The date following the title of a Fund shows the year of its establishment.]

| Principal, Aug. 1, 1907. | UNIVERSITY FUNDS | Principal, July 31, 1908. | |
|---|---|---|---|
| $1,143.00 | Band Music (1903), . . . . . | $1,143.00 | |
| 2,000.00 | **William H. Baldwin, Jr.** (1906), | 2,000.00 | |
| 4,950.00 | **Andrew Bigelow** (1898), . . . . | 4,950.00 | |
| 5,000.00 | **Stanton Blake** (1899), . . . . . | 5,000.00 | |
| 4,771.33 | **Charlotte F. Blanchard** (1891), . | 4,771.33 | |
| 5,250.00 | **Samuel D. Bradford** (1866), . . | 5,250.00 | |
| 50,000.00 | **Martin Brimmer** (1907), . . . . | 50,000.00 | |
| 100,000.00 | **James C. Carter** (1906), . . . . . | 100,000.00 | |
| 12,500.00 | **John W. Carter** (1898), . . . . . | 12,500.00 | |
| 9,200.00 | **Edward Erwin Coolidge** (1906), | 9,530.10 | |
| 155.08 | **Thomas Cotton** (1727), . . . . . | 155.30 | |
| 33,835.06 | **John Cowdin** (1888), . . . . . | 33,835.06 | |
| 115,966.56 | **George B. Dorr** (1882), . . . . . | 115,966.56 | |
| 48,458.50 | **George Draper** (1892), . . . . . | 48,458.50 | |
| 56,788.00 | **R. H. Eddy** (1901), . . . . . | 56,788.00 | |
| 101,225.49 | **Harvard Ellis** (1895), . . . . . | 101,225.49 | |
| 25,000.00 | **Richard W. Foster** (1905), . . . | 25,000.00 | |
| 5,322.09 | **John Davis Williams French** (1901), | 5,322.09 | |
| 20,571.18 | **Gore** (1834), . . . . . | 20,571.18 | |
| 25,000.00 | **John C. Gray** (1881), . . . . . | 25,000.00 | |
| 20,000.00 | **Walter Hastings** (1888), . . . . | 20,000.00 | |
| 20,000.00 | **Henry L. Higginson** (1906), . . | 20,000.00 | |
| 5,000.00 | **George Baxter Hyde** (1895), . . | 5,000.00 | |
| 4,000.00 | Insurance and Guaranty (1860), . . . | 4,000.00 | |
| 16,871.63 | **Leonard Jarvis** (1859), . . . . . | 16,871.63 | |
| 10,000.00 | **Henry P. Kidder** (1894), . . . . | 10,000.00 | |
| 10,000.00 | **Joseph Lee** (1802), . . . . . | 10,000.00 | |
| 10,000.00 | **Theodore Lyman** (1898), . . . . | 10,000.00 | |
| 81,950.54 | **Henry T. Morgan** (1883), . . . . | 81,950.54 | |
| 15,750.00 | **Israel Munson** (1844), . . . . . | 15,750.00 | |
| 50,557.37 | **Henry S. Nourse** (1904), . . . . | 52,098.44 | |
| 113,817.44 | **Francis E. Parker** (1886), . . . | 113,817.44 | |
| 30,000.00 | **William Perkins** (1888), . . . . | 30,000.00 | |
| 51,084.23 | **Henry L. Pierce** (1898), . . . . | 50,053.91 | |
| 161,470.07 | **Henry L. Pierce** (Residuary) (1898), | 167,622.51 | |
| 63,743.28 | President's (1883), . . . . . | 63,837.58 | |
| 366,416.47 | Retiring Allowance (1879), . . . . . | 366,416.47 | |
| 6,000.00 | Riverside (1903), . . . . . | 11,000.00 | |
| 23,370.03 | **John L. Russell** (1889), . . . . . | 23,370.03 | |
| 1,971.95 | **Mary R. Searle** (1903), . . . . . | 2,015.37 | |
| 46,913.13 | **Isaac Sweetser** (1894), . . . . . | 46,913.13 | |
| 5,000.00 | **Seth Turner** (1883), . . . . . | 5,000.00 | |
| 100,000.00 | **William F. Weld** (1893), . . . . | 100,000.00 | $1,853,183.66 |
| $1,841,052.43 | . . Amounts carried forward, . . . . . | | $1,853,183.66 |



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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $1,841,052.43 | . . Amounts brought forward, . . . . . | | $1,853,183.66 |
| | COLLEGE FUNDS* | | |
| 11,309.72 | **John W. P. Abbot** (1874), . . . | 11,880.87 | |
| 27,748.64 | **Alford** Professorship (1765), . . . | 27,748.64 | |
| 7,806.86 | **Daniel Austin** (1879), . . . . . | 7,806.86 | |
| 5,787.61 | **William H. Baldwin, Jr. 1885** (1906), . . . . . | 5,787.61 | |
| ..... | **John Barnard** (1777),† . . . . . | 666.67 | |
| 15,000.00 | **Robert Charles Billings,** for **Gray** Herbarium (1903), . . . . | 15,000.00 | |
| 1,050.00 | **John A. Blanchard** (1873), . . | 1,050.00 | |
| 39,780.00 | Botanic Department (1880), . . . . | 39,780.00 | |
| 28,337.40 | **Boylston** Professorship (1772), . . | 28,337.40 | |
| 850.00 | Centennial Fund for the Botanic Garden (1907), . . . . . | 850.00 | |
| 11,637.55 | **Francis James Child** Mem'l (1897), | 11,879.13 | |
| 7,105.12 | Classical Publication Fund of the **Class of 1856** (1888), . . . . | 7,105.12 | |
| 103,669.41 | **Class of 1880** (1905), . . . . . | 103,669.41 | |
| 53,863.36 | Fund of the **Class of 1882** (1907), | 69,539.56 | |
| ..... | **Class of 1883** (1908), . . . . . | 80,844.03 | |
| ..... | **Class of 1883** Special Fund (1908), | 251.06 | |
| 150,637.54 | Class Subscription (1870), . . . . . | 150,637.54 | |
| 322,158.89 | **Edward W. Codman** (1905), . . | 322,158.89 | |
| ..... | **John Coggan** (1652),† . . . . . | 1,500.00 | |
| 57,703.85 | **T. Jefferson Coolidge,** for Research in Physics, . . . . . | 57,857.60 | |
| 2,388.79 | Cryptogamic Herbarium (balance), . | 2,986.56 | |
| 3,853.79 | **Paul Dudley** (1751), . . . . . | 3,948.42 | |
| 106,746.32 | **Eaton** Professorship (1903), . . . | 107,636.99 | |
| 21,619.50 | **Eliot** Professorship (1814), . . . . | 21,619.50 | |
| 10,000.00 | **Eliot** " (**Jonathan Phillips's** gift) (1854), . . . . . | 10,000.00 | |
| 3,500.01 | **Erving** Professorship (1791), . . . | 3,500.01 | |
| 35,990.99 | **Fisher** " (1834), . . . | 35,990.99 | |
| 434.24 | **Henry Flynt** (1760), . . . . . | 435.59 | |
| 16,240.38 | Fund for Permanent Tutors (1796), . | 16,240.38 | |
| 1,033.57 | Fund for Religious Services (1887), . | 1,033.57 | |
| 350.00 | German Professorship (1907),§ . . . | ..... | |
| 14,222.49 | **Godkin** Lectures (1903), . . . . . | 14,340.70 | |
| 7,121.37 | Gospel Church (1868), . . . . . | 7,301.18 | |
| 278.47 | **Gray** Herbarium (balance), . . . . | 1,923.54 | |
| 32,611.00 | **Asa Gray** Memorial (1898), . . . | 32,711.00 | |
| 21,644.50 | **Asa Gray** Professorship of Systematic Botany (1897), . . . . . | 21,561.59 | |
| 196,934.29 | **Gurney** (1888), . . . . . | 200,096.86 | |
| $3,160,468.09 | . . Amounts carried forward, . . . | $1,425,677.27 | $1,853,183.66 |

* Including some actually used in the Graduate Schools. † See p. 8. § See p. 59.

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $3,160,468.09 | . . Amounts brought forward, . . . | $1,425,677.27 | $1,853,183.66 |
| 5,610.27 | **George Silsbee** and **Ellen Sever Hale** (1904), . . . . . | 5,893.57 | |
| 15,218.85 | **Harvard** Oriental Series (1899), . . | 15,302.58 | |
| 20,655.91 | Herbarium (1865), . . . . . | 20,655.91 | |
| 20,217.08 | **Hersey** Professorship (1772), . . . | 20,217.08 | |
| 21,744.18 | **Hersey** Professorship (**Thomas Lee's** gift) (1856), . . . . . | 21,744.18 | |
| ..... | **Thomas Hollis** (for Treasurer) (1721),† . . . . . | 520.00 | |
| 34,517.60 | **Hollis** Professorship of Divinity, . Composed of these Funds:— **William Dummer** (1762), **Daniel Henchman** (1742), **Thomas Hollis** (1721), **Jonathan Mason** (1798), **James Townsend** (1738). | 34,517.60 | |
| 3,747.33 | **Hollis** Professorship of Mathematics, Composed of these Funds:— **Thomas Brattle** (1713), **William Dummer** (1762), **Daniel Henchman** (1758), **Thomas Hollis** (1726). | 3,747.33 | |
| ..... | **Thomas Hubbard** (1774),† . . | 1,000.00 | |
| ..... | **Nathaniel Hulton** (1695),† . . | 444.44 | |
| ..... | **Thomas Hutchinson** (1739),† . | 233.33 | |
| 6,007.29 | **Ingersoll** Lecture (1894), . . . . | 6,110.64 | |
| 1,866.76 | **Jefferson** Physical Lab'y (balance), | 2,675.20 | |
| 10,806.26 | Lectures on Political Economy (1889), | 11,001.96 | |
| 15,796.97 | **Lee** Fund for Reading (1863), . . . | 15,796.97 | |
| 109,988.84 | **Henry Lee** Professorship (1900), . | 110,043.29 | |
| 8,349.32 | **Joseph Lovering** for Physical Research (1891), . . . . . | 8,444.43 | |
| 66,407.31 | **Lowell** Fund for a Botanic Garden (1882) (formerly Professorship of Natural History, 1805), . . . . . | 66,407.31 | |
| 25,000.00 | **Arthur T. Lyman** (1904), . . . | 50,000.00 | |
| 43,062.93 | **McLean** Professorship (1834), . . | 43,062.93 | |
| 1,139.99 | Music Department (1903), . . . . . | 1,197.56 | |
| ..... | **John Newgate** (1650),† . . . . | 333.33 | |
| 25,739.53 | **William Belden Noble** Lectures (1898), . . . . . | 25,841.47 | |
| 105,729.75 | **Francis Greenwood Peabody** Endowment (1905), . . . . . | 102,290.52 | |
| 14,404.38 | **Daniel H. Peirce** (1876), . . . . | 14,477.12 | |
| 21,000.00 | **Perkins** Professorship (1841), . . | 21,000.00 | |
| 31,500.00 | **Jonathan Phillips** (1861), . . . | 31,500.00 | |
| 75,000.00 | Physical Laboratory Endowm't (1881), | 75,000.00 | |
| $3,843,978.64 | . . Amounts carried forward, . . . | $2,135,136.02 | $1,853,183.66 |

† See p. 8.

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $3,843,978.64 | . . Amounts brought forward, . . . | $2,135,136.02 | $1,853,183.66 |
| 25,020.19 | **Plummer** Foundation (1854), . . | 25,020.19 | |
| 52,500.00 | **Pope** Professorship (1868), . . . . | 52,500.00 | |
| 50,165.00 | **Sarah E. Potter** Endowment Fund, | 189,164.43 | |
| 246,392.60 | Professorship of Hygiene (1899), . . | 275,700.99 | |
| 530,000.00 | **Nelson Robinson, Jr.** (1899), . | 535,000.00 | |
| 199,262.34 | **Nelson Robinson, Jr.** Additional (1906), . . . . . | 198,883.82 | |
| ..... | **Ezekiel Rogers** (1701),† . . . . | 3,535.00 | |
| ..... | **Mary P. Ropes** (1908), . . . . | 47,657.42 | |
| 56,368.73 | **Rumford** Professorship (1819), . . | 56,368.73 | |
| ..... | **Daniel Russell** (1679),† . . . . | 1,514.00 | |
| 2,000.00 | **John L. Russell** (1889), . . . . | 2,000.00 | |
| 60,000.00 | **Gurdon Saltonstall** (1901), . . | 60,000.00 | |
| 4,805.09 | **George William Sawin** (1890), | 5,047.74 | |
| 5,364.40 | **Robert W. Sayles** (1906), . . . | 5,434.52 | |
| 424.34 | School for Social Workers (balance), (1904), . . . . . | ..... | |
| 23,139.83 | **Smith** Professorship (1816), . . . | 23,139.83 | |
| 2,500.00 | **William M. Spackman** (1905), | 2,500.00 | |
| 11,791.87 | **Josiah Stickney** (1899), . . . . | 11,791.87 | |
| 1,933,120.48 | Teachers' Endowment (1905), . . . | 1,995,063.30 | |
| 16,317.44 | **John E. Thayer** (1885), . . . . | 16,532.73 | |
| 1,084.55 | **Elizabeth Torrey** (1896), . . . | 1,128.91 | |
| 11,313.80 | **Henry Warren Torrey** (1890), . | 12,263.27 | |
| 99,965.41 | Twenty-fifth Anniversary Fund of the **Class of 1881** (1906), . . . . . | 109,020.44 | |
| 101,645.42 | **Unknown** Memorial (1898), . . . | 101,401.34 | |
| 50,000.00 | **Henry Villard** (1902), . . . . . | 50,000.00 | |
| 40,000.00 | **Wales** Professorship (1903), . . . | 40,000.00 | |
| 17,337.82 | **Samuel Ward** (1680), . . . . . | 16,176.06 | |
| 6,526.83 | **Cyrus M. Warren** (1893), . . . | 6,692.18 | |
| 116,321.71 | **Henry C. Warren** (1899), . . . | 117,111.98 | |
| 6,757.14 | **Sylvester Waterhouse** (1896), . | 7,098.37 | |
| 50,000.00 | **Increase Sumner Wheeler** (1889), | 50,000.00 | |
| 44.42 | **Jerome Wheelock** (1903), . . . | 57.00 | |
| 1,182.44 | **Chauncey Wright** (1884), . . . | 1,242.13 | 6,154,183.27 |
| | GIFTS FOR SPECIAL USE (BALANCES) | | |
| 1,385.33 | For Equipment for the Department of Architecture, . . . . . | $1,995.27 | |
| 914.96 | Bermuda Biological Station, . . . | 866.30 | |
| 702.57 | Cases, etc., at the Botanic Garden, | 716.62 | |
| 136.89 | Classical Library, . . . . . | ..... | |
| 322.52 | Collections for a Germanic Museum, | 322.52 | |
| ..... | Decorating the front of the Nelson Robinson Jr. Hall, . . . . . | 14,996.35 | |
| $7,569,792.76 | . . Amounts carried forward, . . . | $18,897.06 | $8,007,365.93 |

† See p. 8.

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $7,569,792.76 | . . Amounts brought forward, . . . | $18,897.06 | $8,007,365.93 |
| ..... | For the Department of Forestry, . | 1,904.57 | |
| .13 | Electrical Apparatus, . . . . . | .13 | |
| 814.51 | Furnishings of the Department of Social Ethics, . . . . . | 830.50 | |
| 173.07 | Furnishing Emerson Hall, . . . . | ..... | |
| 784.35 | Philosophical Library, . . . . . | 151.47 | |
| 1,404.72 | Physical Research, . . . . . | 1,007.30 | |
| 3,514.01 | Plantation of Shrubs, etc., . . . . | 3,584.29 | |
| 1,125.00 | Salaries, . . . . . | 2,023.73 | |
| 1,115.01 | Sanskrit Department, . . . . . | 1,482.19 | |
| 1,018.01 | Semitic Library, . . . . . | 728.70 | |
| 970.95 | Sugar-cane investigation, etc., . . | 863.27 | |
| ..... | Summer School Mining Camp, . . | 1,511.44 | |
| 3,927.43 | Sundry Gifts (balances), . . . . . | 2,288.21 | 35,272.86 |
| | FELLOWSHIP FUNDS | | |
| 19,647.74 | **Julia Amory Appleton** (1906), | $20,139.97 | |
| 5,461.37 | **George W. Dillaway** (1903), . . | 5,537.15 | |
| ..... | Fellowship in Central American Archæology (balance), . . . . . | 613.90 | |
| 11,729.96 | **Ozias Goodwin** Memorial (1889), | 11,822.33 | |
| 10,960.33 | **Harris** (1868), . . . . . | 11,263.81 | |
| 25,646.61 | **Edward William Hooper** (1905), | 25,691.78 | |
| 11,113.18 | **John Thornton Kirkland** (1871), | 11,399.39 | |
| 12,101.07 | **Henry Lee** Memorial (1889), . . | 12,212.17 | |
| 14,114.91 | **Charles Eliot Norton** (1901), . | 14,115.67 | |
| 13,248.22 | **Robert Treat Paine** (1887), . . | 13,417.24 | |
| 59,718.51 | **John Parker** (1873), . . . . . | 60,484.32 | |
| 10,351.78 | **Francis Parkman** (1906), . . . | 10,424.56 | |
| 33,224.19 | **Rogers** (1869), . . . . . | 33,452.00 | |
| 12,393.83 | **Henry Bromfield Rogers** Memorial (1889), . . . . . | 12,519.73 | |
| 50.00 | South End House (balance), . . . . | 50.00 | |
| 12,058.00 | **John Tyndall** (1885), . . . . . | 12,166.98 | |
| 11,634.03 | **James Walker** (1881), . . . . . | 11,471.55 | |
| 24,420.88 | **Whiting** (1896), . . . . . | 24,754.14 | 291,536.64 |
| | SCHOLARSHIP FUNDS | | |
| 3,886.78 | **Abbot** (1852), . . . . . | $3,933.07 | |
| 2,389.55 | **Alford** (1785), . . . . . | 2,510.25 | |
| 5,421.57 | **Bartlett** (1881), . . . . . | 5,445.38 | |
| 5,690.65 | **Bassett** (1876), . . . . . | 5,744.05 | |
| 13,546.04 | **Bigelow** (1865), . . . . . | 13,730.11 | |
| 2,984.59 | **Samuel A. Borden** (1896), . . . | 3,135.33 | |
| 115,482.52 | **Bowditch** (1864), . . . . . | 116,254.41 | |
| 4,061.72 | **Bright** (balance), . . . . . | 4,404.35 | |
| 3,962.34 | **Browne** (1687), . . . . . | 4,012.42 | |
| $8,029,940.32 | . . Amounts carried forward, . . . | $159,169.37 | $8,334,175.43 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $8,029,940.32 | . . Amounts brought forward, . . . | $159,169.37 | $8,334,175.43 |
| 5,510.45 | **Morey Willard Buckminster** (1898), . . . . . | 5,588.70 | |
| 34,775.08 | **Burr** (1895), . . . . . | 35,331.22 | |
| 6,208.91 | **Ruluff Sterling Choate** (1884), | 6,247.46 | |
| ..... | **George Newhall Clark** (1908), | 10,250.00 | |
| 8,595.06 | **Class of 1802** (1870), . . . . . | 8,704.11 | |
| 3,311.63 | " **1814** (1853), . . . . . | 3,353.89 | |
| 6,809.51 | " **1815(Kirkland)** (1852), | 6,903.42 | |
| 4,739.22 | " **1817** (1852), . . . . . | 4,803.54 | |
| 3,570.53 | " **1828** (1882), . . . . . | 3,600.87 | |
| 5,180.81 | " **1835** (1853), . . . . . | 5,267.45 | |
| 5,309.26 | " **1841** (1871), . . . . . | 5,377.36 | |
| 5,307.98 | " **1852 (Dana)** (1876), . . | 5,376.03 | |
| 16,310.71 | " **1856** (1885), . . . . . | 16,534.42 | |
| 4,940.54 | " **1867** (1886), . . . . . | 5,015.06 | |
| 5,262.20 | " **1877** (1902), . . . . . | 5,327.93 | |
| 6,208.65 | " **1883** (1900), . . . . . | 6,297.20 | |
| 12,426.41 | **Crowninshield** (1877), . . . . . | 12,633.92 | |
| 600.00 | **Warren H. Cudworth** (balance), | 600.00 | |
| 6,184.55 | **Francis H. Cummings** (1898), . | 6,496.89 | |
| 5,620.55 | **George and Martha Derby** (1881), | 5,654.41 | |
| 5,269.90 | **Julius Dexter** (1892), . . . . . | 5,336.03 | |
| 2,934.73 | **Orlando W. Doe** (1893), . . . . | 2,982.95 | |
| 5,552.36 | **William Samuel Eliot** (1875), . | 5,582.74 | |
| 250.00 | Department of Education (balance), . | 250.00 | |
| 42,277.97 | **Joseph Eveleth** (1896), . . . . | 42,813.01 | |
| 2,249.40 | Fall River (1893), . . . . . | 2,282.97 | |
| 6,486.36 | **Farrar** (1873), . . . . . | 6,563.90 | |
| 11,814.69 | **Richard Augustine Gambrill** (1890), . . . . . | 11,961.35 | |
| 7,911.99 | **Charles Haven Goodwin** (1889), | 8,011.55 | |
| 4,476.51 | **Greene** (1863), . . . . . | 4,552.60 | |
| 100.00 | **Price Greenleaf** (balance), . . . | 220.00 | |
| 10,477.84 | **John Appleton Haven** (1902), . | 10,606.98 | |
| 24,685.49 | **William Hilton** (1897), . . . . | 25,032.08 | |
| 11,140.01 | **Ebenezer Rockwood Hoar** (1895), . . . . . | 11,277.58 | |
| 6,528.44 | **Levina Hoar,** for the town of Lincoln, Mass. (1876), . . . . . | 6,608.10 | |
| 13,772.12 | **Hodges** (1878), . . . . . | 13,329.61 | |
| ..... | **Priscilla Clark Hodges** (1907), | 4,176.75 | |
| 6,498.57 | **Hollis** (1722), . . . . . | 6,576.77 | |
| 11,117.56 | **Henry B. Humphrey** (1890), . . | 11,229.02 | |
| 31,702.21 | **Charles L. Jones** (1901), . . . . | 32,103.16 | |
| 10,770.46 | **George Emerson Lowell** (1886), | 10,914.34 | |
| 5,535.56 | **Markoe** (1903), . . . . . | 5,665.13 | |
| 4,280.71 | **Matthews** (balance), . . . . . | 4,925.62 | |
| $8,402,645.25 | . . Amounts carried forward, . . . | $552,035.49 | $8,334,175.43 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $8,402,645.25 | . . Amounts brought forward, . . . | $552,035.49 | $8,334,175.43 |
| 6,408.89 | **Merrick** (1888), . . . . . | 6,507.54 | |
| 8,555.73 | **Morey** (1868), . . . . . | 8,662.81 | |
| 6,006.51 | **Lady Mowlson** (1643), . . . . . | 6,084.86 | |
| 2,670.81 | Boston Newsboys' (1906), . . . . . | 2,955.53 | |
| 5,868.87 | **Howard Gardner Nichols** (1897), | 5,940.25 | |
| 6,184.56 | **Lucy Osgood** (1873), . . . . . | 6,271.90 | |
| 5,296.20 | **George Foster Peabody** (1902), | 5,371.25 | |
| 7,085.85 | **Pennoyer** (1670), . . . . . | 7,264.17 | |
| 4,553.12 | **Rebecca A. Perkins** (1869), . . | 4,683.05 | |
| 11,130.29 | Philadelphia (1904), . . . . . | 11,267.35 | |
| 1,663.14 | **Wendell Phillips** Mem'l (1895), | 1,697.12 | |
| 4,077.50 | **William Reed** (1907), . . . . . | 4,146.44 | |
| 350.00 | **Ricardo** Prize (balance), . . . . . | 350.00 | |
| 1,342.30 | **Rodger** (1883), . . . . . | 1,410.07 | |
| 3,593.33 | **Henry Bromfield Rogers** (1859), | 3,624.78 | |
| 5,926.95 | **Edward Russell** (1877), . . . . | 6,001.21 | |
| 5,833.29 | **Sales** (1893), . . . . . | 5,927.86 | |
| 11,588.53 | **Saltonstall** (1739), . . . . . | 11,748.77 | |
| 8,838.58 | **Leverett Saltonstall** (1895), . . | 8,959.95 | |
| 7,143.04 | **Mary Saltonstall** (1730), . . . . | 7,203.76 | |
| 3,275.43 | **Sever** (1868), . . . . . | 3,290.82 | |
| 11,467.21 | **Sewall** (1696), . . . . . | 11,646.29 | |
| 50,255.21 | **Shattuck** (1854), . . . . . | 50,693.09 | |
| 6,214.62 | **Slade** (1877), . . . . . | 6,278.43 | |
| 4,704.57 | **Dunlap Smith** (1903), . . . . . | 4,704.82 | |
| 4,650.78 | **Story** (1864), . . . . . | 4,710.66 | |
| 3,313.01 | **Stoughton** (1701), . . . . . | 3,495.38 | |
| 4,075.33 | **Swift** (1899), . . . . . | 4,281.12 | |
| 81,294.96 | **Thayer** (1857), . . . . . | 82,640.36 | |
| 4,434.45 | **Gorham Thomas** (1865), . . . . | 4,508.37 | |
| 7,938.53 | **Toppan** (1868), . . . . . | 8,039.45 | |
| 26,381.76 | **Townsend** (1861), . . . . . | 26,714.05 | |
| 5,182.53 | **Walcott** (1855), . . . . . | 5,244.27 | |
| 10,979.75 | **Christopher M. Weld** (1899), . | 11,134.24 | |
| 5,569.60 | **Jacob Wendell** (1899), . . . . . | 5,650.88 | |
| 12,105.10 | **Whiting** (1874), . . . . . | 12,236.40 | |
| 5,094.85 | **Josiah Dwight Whitney** (1904), | 5,207.15 | |
| 10,083.71 | **Mary L. Whitney** (1903), . . . | 10,272.93 | |
| 10,061.38 | **Willard** (1907), . . . . . | 10,569.46 | |
| 10,303.80 | **Charles Wyman** (1905), . . . . | 10,424.15 | 949,806.48 |
| | BENEFICIARY AND LOAN FUNDS | | |
| 53,070.16 | **Rebecca C. Ames** (1903), . . . | $53,772.19 | |
| 663.53 | **Nathaniel Appleton** (1772), . . | 697.06 | |
| 2,066.32 | **Frank Bolles** Memorial (1894), . | 2,140.65 | |
| 1,655.90 | **William Brattle** (1717), . . . . | 1,739.53 | |
| 70,559.26 | **Daniel A. Buckley** (1905), . . . | 77,793.50 | |
| $8,922,064.49 | . . Amounts carried forward, . . . | $136,142.93 | $9,283,981.91 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $8,922,064.49 | . . Amounts brought forward, . . . | $136,142.93 | $9,283,981.91 |
| 51,007.68 | **Walter Channing Cabot** (1905), | 51,142.63 | |
| 1,131.24 | **Thomas Danforth** (1724), . . . | 1,188.36 | |
| 5,455.27 | **Moses Day** (1880), . . . . . | 5,455.27 | |
| 473.92 | **John Ellery** (1738), . . . . . | 497.86 | |
| 1,334.94 | Exhibitions (1796), . . . . . | 1,334.94 | |
| 861.40 | **Thomas Fitch** (1737), . . . . . | 904.88 | |
| 510.89 | **Ephraim Flynt** (1723), . . . . | 536.70 | |
| 177.62 | **Henry Flynt** (1760), . . . . . | 186.61 | |
| 531.12 | **Henry Gibbs** (1722), . . . . . | 557.94 | |
| 3,518.35 | **John Glover** (1653), . . . . . | 3,696.01 | |
| 17,068.79 | **Price Greenleaf** Aid (balance), . | 18,751.71 | |
| ..... | Student Fund of the **Harvard** Engineering Society of New York (1908) (balance), . . . . . | 600.00 | |
| 11,177.93 | **Edwin A. W. Harlow** (1905), . | 11,400.76 | |
| 396.08 | **Edward Holyoke** (1748), . . . | 416.08 | |
| 2,561.25 | **Robert Keayne** (1659), . . . . | 2,690.58 | |
| 26,227.50 | **Bertram Kimball** (1903), . . . | 26,294.01 | |
| 1,108.82 | **Mary Lindall** (1812), . . . . . | 1,164.82 | |
| 5,988.87 | **Susan B. Lyman** (1899), . . . . | 5,988.87 | |
| 541.06 | **Susan B. Lyman** Loans (College) (balance), . . . . . | 742.69 | |
| 248.81 | **Anne Mills** (1725), . . . . . | 261.38 | |
| 10,919.89 | **Munroe** (1880), . . . . . | 10,919.89 | |
| 2,098.39 | **Palfrey** Exhibition (1821), . . . . | 2,124.34 | |
| 5,095.03 | **Dr. Andrew P. Peabody** Memorial (1896), . . . . . | 5,237.33 | |
| 1,288.69 | Scholarship and Beneficiary Money Returned (balance), . . . . . | 7,301.53 | |
| 236.99 | **Joseph Sewall** (1765), . . . . . | 248.96 | |
| 15,499.03 | **Alexander Wheelock Thayer** (1899), . . . . . | 15,801.73 | |
| 11,168.49 | **Quincy Tufts** (1877), . . . . . | 11,168.49 | |
| 319.96 | **Benjamin Wadsworth** (1737), . | 336.12 | 323,093.42 |
| | PRIZE FUNDS | | |
| 1,757.40 | **James Gordon Bennett** (1893), . | $1,846.13 | |
| 402.24 | **Philo Sherman Bennett** (1905), | 382.54 | |
| 11,038.72 | **Francis Boott** (1904), . . . . . | 10,200.00 | |
| 31,882.15 | **Bowdoin** Prizes for Dissertations (1791), | 32,004.47 | |
| 3,136.62 | **Boylston** Prizes for Elocution (1817), | 3,040.04 | |
| 5,467.10 | **Coolidge** Debating (1899), . . . . | 5,543.18 | |
| ..... | **Dante** Prize (balance), . . . . . | 50.00 | |
| 2,714.80 | **Lloyd McKim Garrison** Prize and Medal (1904), . . . . . | 2,735.16 | |
| 1,977.21 | **Edward Hopkins** Gift for "Deturs" (1718) (balance), . . . . . | 2,097.71 | |
| $9,157,388.74 | . . Amounts carried forward, . . . | $57,899.23 | $9,607,075.33 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $9,157,388.74 | . . Amounts brought forward, . . . | $57,899.23 | $9,607,075.33 |
| 1,147.29 | **Sales** (1892), . . . . . | 1,160.21 | |
| 2,649.49 | **John O. Sargent** (1889), . . . . | 2,683.26 | |
| 7,000.00 | **George B. Sohier** (1890), . . . . | 7,000.00 | |
| 3,978.21 | **Charles Sumner** (1874), . . . . | 4,179.10 | |
| 3,987.68 | **Robert N. Toppan** (1894), . . . | 3,889.07 | |
| 2,266.43 | **Philip Washburn** (1899), . . . | 2,305.86 | |
| 114,550.10 | **David A. Wells** (1901), . . . . | 115,334.88 | 194,951.61 |

LIBRARY FUNDS

| | | | |
|---|---|---|---|
| ..... | **Boott** Income for Books (balance), | $947.20 | |
| 2,181.25 | **Bowditch** (1861), . . . . . | 2,182.82 | |
| 102.95 | **Bright** (balance), . . . . . | 119.07 | |
| 1,000.00 | **William R. Castle** (1907), . . . | 1,009.12 | |
| 739.45 | Fund of the **Class of 1851** (1899), | 776.77 | |
| 728.16 | " " " **1851** (C. F. **Dunbar's** Gift) (1899), . . . . | 764.92 | |
| 3,582.24 | Book Fund of the **Class of 1881** (1906), . . . . . | 3,692.30 | |
| 27,763.33 | **Edwin Conant** (1892), . . . . . | 27,832.30 | |
| 25,916.69 | **Constantius** (1886), . . . . . | 25,972.79 | |
| 5,380.42 | **Denny** (1875), . . . . . | 5,334.57 | |
| 5,418.42 | **Farrar** (1871), . . . . . | 5,465.80 | |
| 3,285.11 | **Haven** (1844), . . . . . | 3,342.22 | |
| 10,078.03 | **Hayes** (1885), . . . . . | 10,133.82 | |
| 5,397.19 | **Hayward** (1864), . . . . . | 5,398.76 | |
| 129.68 | **R. M. Hodges** (balance), . . . . | 517.68 | |
| 2,459.72 | **Hollis** (1781), . . . . . | 2,381.12 | |
| 2,161.41 | **Homer** (1871), . . . . . | 2,153.96 | |
| 514.75 | **Jarvis** (1885), . . . . . | 521.57 | |
| 5,335.06 | **Lane** (1863), . . . . . | 5,309.14 | |
| 27,690.52 | **Lowell** (1881), . . . . . | 28,169.48 | |
| 60,574.27 | **Minot** (1870), . . . . . | 60,193.78 | |
| 8,954.62 | **Charles Eliot Norton** (1905), . | 9,254.97 | |
| 7,219.94 | **Lucy Osgood** (1873), . . . . . | 7,205.70 | |
| 7,119.63 | **Mary Osgood** (1860), . . . . . | 7,054.22 | |
| ..... | **Francis Parkman Memorial** (1908), . . . . . | 5,945.47 | |
| 3,916.67 | **Sales** (1892), . . . . . | 4,011.55 | |
| 5,152.20 | **Salisbury** (1858), . . . . . | 5,331.52 | |
| 5,120.00 | **Stephen Salisbury** (1907), . . . | 5,120.00 | |
| 20,000.00 | **Sever** (1878), . . . . . | 20,297.41 | |
| 3,998.32 | **Shapleigh** (1801), . . . . . | 3,998.32 | |
| 80.17 | **George B. Sohier** Income for Books (balance), . . . . . | 89.67 | |
| 10,545.71 | Subscription for Library (1859), . . | 10,561.91 | |
| 37,514.04 | **Sumner** (1875), . . . . . | 37,553.02 | |
| $9,593,027.89 | . . Amounts carried forward, . . . | $308,642.95 | $9,802,026.94 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $9,593,027.89 | . . Amounts brought forward, . . | $308,642.95 | $9,902,026.94 |
| 5,168.00 | **Kenneth Matheson Taylor** (1899), | 5,240.16 | |
| 12,123.10 | **Daniel Treadwell** (1885), . . . | 11,971.97 | |
| 5,007.22 | **Ichabod Tucker** (1875), . . . . | 5,072.77 | |
| 801.81 | **Wales** Income for Books (balance), | 492.30 | |
| 15,993.00 | **Walker** (1875), . . . . . | 16,164.49 | |
| 5,306.02 | **Ward** (1858), . . . . . | 5,326.43 | |
| 20,226.65 | **J. Huntington Wolcott** (1891), | 20,124.47 | |
| 100,000.00 | **Eben Wright** (1883), . . . . . | 100,000.00 | |
| 3,219.79 | Sundry Gifts for books (balances), . | 2,898.53 | |
| 813.45 | Sundry Gifts for service (balances), . | 50.99 | |
| 1,060.44 | Sundry balances, . . . . . | 438.87 | 476,423.93 |
| | DIVINITY SCHOOL FUNDS | | |
| 6,261.20 | Divinity School (balance), . . . . . | $4,754.38 | |
| 71,427.02 | New Endowment (1879), . . . . . | 71,427.02 | |
| 17,000.00 | **Oliver Ames** (1880), . . . . . | 17,000.00 | |
| 525.00 | **Hannah C. Andrews** (1836), . . | 525.00 | |
| 1,115.26 | **Daniel Austin** (1880), . . . . . | 1,115.26 | |
| 1,000.00 | **Adams Ayer** (1869), . . . . . | 1,000.00 | |
| 15,275.00 | **Joseph Baker** (1876), . . . . . | 15,275.00 | |
| 210.22 | Beneficiary money returned (balance), | 220.82 | |
| 4,540.15 | **Rushton Dashwood Burr** (1894), | 4,468.41 | |
| 37,583.74 | **Bussey** Professorship (1862), . . | 37,583.74 | |
| 2,177.95 | **Joshua Clapp** (1836), . . . . . | 2,177.95 | |
| 5,000.00 | **Edwin Conant** (1892), . . . . . | 5,000.00 | |
| 25,544.37 | **Dexter** Lectureship (1810), . . . | 25,544.37 | |
| 54,703.14 | **Frothingham** Professorship (1892), | 55,203.14 | |
| 1,050.00 | **Abraham W. Fuller** (1847), . . | 1,050.00 | |
| 911.34 | **Lewis Gould** (1852), . . . . . | 911.34 | |
| 899.99 | **Louisa J. Hall** (1893), . . . . . | 942.51 | |
| 6,008.43 | **Hancock** Professorship, . . . . . | 6,008.43 | |
| | Composed of these Funds: — **Thomas Hancock** (1765), **Stephen Sewall** (1762). | | |
| 77,600.81 | **Charles L. Hancock** (1891), . . | 77,625.81 | |
| 5,000.00 | **Haven** (1898), . . . . . | 5,000.00 | |
| 1,050.00 | **Samuel Hoar** (1857), . . . . . | 1,050.00 | |
| 10,000.00 | **Henry P. Kidder** (1881), . . . | 10,000.00 | |
| 9,184.69 | **Henry Lienow** (1841), . . . . . | 9,184.69 | |
| 1,050.00 | **Caroline Merriam** (1867), . . . | 1,050.00 | |
| 16,015.81 | **Parkman** Professorship (1814), . | 16,015.81 | |
| 610.69 | **John W. Quinby** (1888), . . . . | 626.30 | |
| 1,000.00 | **Abby Crocker Richmond** (1881), | 1,000.00 | |
| 1,000.00 | **John L. Russell** (1890), . . . . | 1,000.00 | |
| 10,000.00 | **William B. Spooner** (1890), . . | 10,000.00 | |
| 40,000.00 | **Thomas Tileston** of New York Endowment (1879), . . . . . | 40,000.00 | |
| $10,186,492.18 | . . Amounts carried forward, . . . | $422,759.98 | $10,278,450.87 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $10,186,492.18 | . . Amounts brought forward, . . . | $422,759.98 | $10,278,450.87 |
| 5,250.00 | **Mary P. Townsend** (1861), . . | 5,250.00 | |
| 2,100.00 | **Winthrop Ward** (1862), . . . . | 2,100.00 | |
| 56,845.73 | **Winn** Professorship (1877), . . . | 57,345.73 | 487,455.71 |
| | SCHOLARSHIP AND BENEFICIARY FUNDS | | |
| 2,578.82 | **Robert Charles Billings** Prize (1904), . . . . . | $2,609.06 | |
| 13,441.67 | **Abner W. Buttrick** (1880), . . . | 13,545.49 | |
| 5,768.76 | **Thomas Cary** (1820), . . . . . | 5,820.09 | |
| 2,865.96 | **George Chapman** (1834), . . . | 2,910.69 | |
| 4,609.00 | **Joshua Clapp** (1839), . . . . . | 4,661.75 | |
| 15,253.76 | **Jackson** Foundation (1835), . . . | 15,384.09 | |
| 5,662.94 | **J. Henry Kendall** (1863), . . . | 5,748.92 | |
| 3,567.55 | **Nancy Kendall** (1846), . . . . | 3,607.73 | |
| 1,050.00 | **William Pomroy** (1835), . . . . | 1,050.00 | 55,337.82 |
| | LAW SCHOOL FUNDS | | |
| 132,456.87 | Law School (balance), . . . . . | $30,552.54 | |
| 574.18 | **James Barr Ames** Loan (1904), | 603.17 | |
| 3,810.51 | **James Barr Ames** Prize (1898), | 4,061.97 | |
| 82,041.58 | **Bemis** Professorship (1879), . . . | 86,184.70 | |
| 2,047.68 | Gift of **James Munson Barnard** and **Augusta Barnard** (balance), | 2,088.63 | |
| 23,979.82 | **Bussey** Professorship (1862), . . | 23,979.82 | |
| 107,810.74 | **James C. Carter** Professorship (1906), . . . . . | 113,255.20 | |
| 12,638.91 | **James Coolidge Carter** Loan (1906), . . . . . | 13,277.18 | |
| 15,750.00 | **Dane** Professorship (1829), . . . . | 15,750.00 | |
| 5,081.85 | **Samuel Phillips Prescott Fay,** 1798, Fund and Scholarship (1907), | 5,338.49 | |
| 3,739.88 | **George Fisher** Scholarship (1906), | 3,778.75 | |
| 476.84 | **Hughes** Loan (1903), . . . . . | 444.13 | |
| 47,021.25 | Law School Book (1882), . . . . . | 47,021.25 | |
| 100,000.00 | Law School Library (1898), . . . . | 100,000.00 | |
| 8,340.81 | **Royall** Professorship (1781), . . . | 8,340.81 | |
| 739.55 | Scholarship money returned (balance), | 443.37 | |
| 94,994.97 | **Weld** Professorship (1882), . . . | 94,994.97 | 550,114.98 |
| | LAWRENCE SCIENTIFIC SCHOOL FUNDS | | |
| 1,080.53 | **Edward Austin** Loans repaid (bal.), | $1,253.24 | |
| 30,686.85 | **John B. Barringer** (1873), . . . | 30,686.85 | |
| 27,836.09 | **George H. Emerson** Scholarship (1903), . . . . . | 28,322.01 | |
| 5,816.87 | **George A. Gardner** (1892), . . | 5,879.98 | |
| 11,162.55 | **Hennen Jennings** Scholarship (1898), | 11,726.28 | |
| $11,023,574 70 | . . Amounts carried forward, . . . | $77,868.36 | $11,871,359.38 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $11,023,574.70 | . . Amounts brought forward, . . . | $77,868.36 | $11,371,359.33 |
| 61,536.43 | **Abbott Lawrence** (1859), . . . | 61,536.43 | |
| 50,375.00 | **James Lawrence** (1865), . . . . | 50,375.00 | |
| 150.00 | **Lawrence** Scientific School Association Scholarship (balance), . . | 150.00 | |
| 883.26 | **Lawrence** Scientific School Loans repaid (balance), . . . . . | 1,690.14 | |
| 295.52 | **Susan B. Lyman** Loan (L. S. S.) (balance), . . . . . | 396.33 | |
| 40,805.73 | Professorship of Engineering (1847), | 40,805.73 | |
| 25,000.00 | **Arthur Rotch** (1895), . . . . . | 25,000.00 | |
| 32,288.64 | **Shaler** Memorial (1907), . . . . . | 33,713.25 | |
| 6,371.54 | **Stuart Wadsworth Wheeler** (1898), | 6,752.33 | 298,287.57 |
| | **GRADUATE SCHOOL OF APPLIED SCIENCE FUNDS** | | |
| 250.00 | **Warren Delano Jr.** Loan Scholarship. Gift (balance), . . . . . | | |
| 250.00 | **E. D. Peters** Scholarship. Gift (bal.), | $250.00 | |
| ..... | **Henry Weidemann Locke** Scholarship. Gift (balance), . . | 100.00 | 350.00 |
| | **GRADUATE SCHOOL OF BUSINESS ADMINISTRATION FUNDS** | | |
| ..... | Gifts (balance), . . . . . | $1,489.08 | 1,489.08 |
| | **MUSEUM OF COMPARATIVE ZOÖLOGY FUNDS** | | |
| 32,074.13 | Museum of Comparative Zoölogy (bal.), | $28,100.44 | |
| 297,933.10 | **Agassiz** Memorial (1875), . . . . | 297,933.10 | |
| 7,594.01 | Teachers' and Pupils' (1875), . . . | 7,594.01 | |
| 5,841.28 | **Virginia Barret Gibbs** Scholarship (1892), . . . . . | 5,886.25 | |
| 50,000.00 | **Gray** Fund for Zoölogical Museum (1859), . . . . . | 50,000.00 | |
| 108,087.41 | **Sturgis Hooper** (1865), . . . . | 108,402.05 | |
| 7,740.66 | **Humboldt** (1869), . . . . . | 7,740.66 | |
| 5,000.00 | **Willard Peele Hunnewell** (1901), | 5,000.00 | |
| 117,469.34 | Permanent (1859), . . . . . | 117,469.34 | |
| ..... | **Maria Whitney** (1907), . . . . . | 5,200.00 | 633,325.85 |
| | **GERMANIC MUSEUM FUNDS** | | |
| ..... | Germanic Museum (balance), . . . | $155.42 | |
| ..... | Germanic Museum Building (1908), | 456.11 | |
| 408.97 | Unrestricted Gift (balance), . . . | 204.91 | |
| 26,285.00 | **Emperor William** (1906), . . . | 26,335.00 | 27,151.44 |
| $11,900,164.72 | . . Amounts carried forward, . . . . . | | $12,331,963.32 |

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|---|---|---|---|
| $11,900,164.72 | . . Amounts brought forward, . . . . . | $12,331,963.32 | |

## PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY FUNDS

| | | | |
|---|---|---|---|
| 12,922.89 | **Hemenway** Fellowship (1891), . | $12,575.50 | |
| 28,355.56 | **Peabody** Building (1866), . . . | 28,355.56 | |
| 47,335.10 | **Peabody** Collection (1866), . . . | 47,335.10 | |
| 47,594.43 | **Peabody** Professor (1866), . . . | 47,669.24 | |
| 30,179.43 | **Thaw** Fellowship (1890), . . . . | 30,196.98 | |
| 10,418.37 | **Henry C. Warren** Exploration (1899), . . . . . | 10,031.26 | |
| 5,000.00 | **Susan Cornelia Warren** (1902), | 5,000.00 | |
| 5,861.45 | **Robert C. Winthrop** Scholarship (1895), . . . . . | 5,932.43 | |
| 20,912.21 | **Huntington Frothingham Wolcott** (1891), . . . . . | 20,974.94 | |
| 108.71 | Anonymous Gift for South American Expedition (balance), . . . . . | ..... | 208,071.01 |

## MEDICAL SCHOOL FUNDS

| | | | |
|---|---|---|---|
| 2,509.54 | **Harvard** Medical Alumni (1907), | $4,184.67 | |
| ..... | **Harvard** Medical Alumni Gifts (balance), . . . . . | 1,450.00 | |
| 10,153.15 | Anonymous Fund in the Department of Theory and Practice (1906), . | 10,265.88 | |
| 11,474.00 | **Edward Austin** (Bacteriological Laboratory) (1899), . . . . . | 11,403.14 | |
| 25,512.68 | **Edward M. Barringer** (1881), | 30,271.54 | |
| 100,000.00 | **Robert C. Billings** (1900), . . | 100,000.00 | |
| 6,433.95 | **J. Ingersoll Bowditch** (1889), | 6,496.24 | |
| 1,532.97 | **Boylston** Fund for Medical Books (1800), . . . . . | 1,610.39 | |
| 23,039.60 | **John B. & Buckminster Brown** Endowment (1896), . . . . . | 23,703.12 | |
| 50,651.80 | **Bullard** Professorship of Neuropathology (1906), . . . . . | 50,577.98 | |
| 94,023.59 | **Caroline Brewer Croft** (1899), | 97,799.76 | |
| 384,448.40 | **Calvin** and **Lucy Ellis** (1899), | 384,903.33 | |
| 207,382.29 | **George Fabyan** Foundation for Comparative Pathology (1906), . | 210,926.54 | |
| 1,836.08 | **Samuel E. Fitz** (1884), . . . . | 1,836.08 | |
| 4,444.39 | **F. B. Greenough** (Surgical Research) (1901), . . . . . | 4,668.81 | |
| 103,823.51 | **George Higginson** Professorship (1902), . . . . . | 105,066.62 | |
| 51,554.01 | **John Homans** Memorial (1906), | 52,174.24 | |
| $13,187,672.83 | . . Amounts carried forward, . . | $1,097,388.34 | $12,540,034.33 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $13,187,672.88 | . . Amounts brought forward, . . | $1,097,338.34 | $12,540,034.33 |
| 69,192.65 | **Jackson** Professorship of Clinical Medicine (1859), . . . . . | 69,192.65 | |
| 98,347.63 | **Henry Jackson** Endowment, . . | 100,814.20 | |
| 50,181.87 | **Walter Augustus Lecompte** Professorship of Otology (1907), | 51,155.59 | |
| ..... | **Harriet Newell Lowell** (1907), | 2,058.93 | |
| 2,125.60 | Medical Library (1872), . . . . . | 2,232.91 | |
| 53,145.36 | **William O. Moseley** (1897), . . | 53,329.18 | |
| 38,750.00 | New Subscription (1888), . . . . . | 38,850.00 | |
| 10,020.18 | **Lyman Nichols** (1907), . . . . | 10,020.18 | |
| 71,947.44 | **Henry L. Pierce** (Residuary) (1898), | 15,814.47 | |
| 56,027.97 | **Proctor** (1903), . . . . . | 55,820.24 | |
| 1,000,000.00 | **John D. Rockefeller** Gift (1902), | 1,000,000.00 | |
| 5,783.96 | Gift for Pathological Laboratory, . | 5,811.72 | |
| 9,335.94 | **Dr. Ruppaner** (1897), . . . . . | 9,335.94 | |
| 35,000.00 | **Henry Francis Sears** Fund for Pathology (1907), . . . . . | 35,195.54 | |
| 77,000.00 | **George C. Shattuck** (1853), . . | 77,000.00 | |
| 10,857.39 | **James Skillen** Memorial Fund (1907), . . . . . | 10,857.39 | |
| 115,960.09 | **James Stillman** Professorship (1902), . . . . . | 116,816.07 | |
| 5,603.87 | School of Comparative Medicine (1899), . . . . . | 5,886.87 | |
| 6,796.40 | Surgical Laboratory (1897), . . . . | 6,268.40 | |
| 15,765.11 | **Mary W. Swett** (1884), . . . . | 15,765.11 | |
| 20,000.00 | **Samuel W. Swett** (1884), . . . | 20,000.00 | |
| 2,000.00 | **Quincy Tufts** (1879), . . . . . | 2,000.00 | |
| 12,391.55 | **Warren** Fund for Anatomical Museum (1848), . . . . . | 11,589.42 | |
| 50,829.78 | **Edward Wigglesworth** Professorship of Dermatology (1907), | 51,136.70 | |
| 41,964.00 | **Charles Wilder** (1900), . . . . | 42,070.42 | |
| 41,077.36 | **Henry Willard Williams** (1898), | 43,151.75 | |
| 491.66 | Gifts for Anatomical Research (bal.), | 235.14 | |
| 3,921.93 | Gifts for Biological Chemistry (bal.), | 2,011.30 | |
| 4,333.82 | Gift for Pathological Dep't (bal.), | 3,906.98 | |
| 1,486.75 | Sundry Gifts (balances), . . . . . | 1,892 36 | 2,957,557.80 |
| | FELLOWSHIP FUNDS | | |
| 8.32 | Anonymous Gift for Teaching Fellowships in Histology and Embryology (balance), . . . . . | $8.32 | |
| ..... | **Charles Follen Folsom** Memorial (1908), . . . . . | 12,042.05 | |
| 5,488.62 | **George Cheyne Shattuck** Memorial (1891), . . . . . | 5,540.82 | |
| $15,103,508.08 | . . Amounts carried forward, . . | $17,591.19 | $15,497,592.13 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $15,103,508.08 | . . Amounts brought forward, . . | $17,591.19 | $15,497,592.13 |
| 5,873.14 | **Charles Eliot Ware** Memorial (1891), . . . . . | 5,944.73 | |
| 5,436.79 | **John Ware** Memorial (1891), . . | 5,486.36 | 29,022.28 |
| | SCHOLARSHIP FUNDS | | |
| 5,280.72 | Anonymous Aid (1905), . . . . . | $5,294.89 | |
| 5,308.77 | **Lucius F. Billings** (1900), . . | 5,376.87 | |
| 6,245.50 | **James Jackson Cabot** (1906), | 6,285.92 | |
| 5,877.45 | **David Williams Cheever** (1889), | 5,924.24 | |
| 3,249.62 | **Cotting** Gift (1900), . . . . . | 3,288.75 | |
| 2,939.11 | **Orlando W. Doe** (1893), . . . | 2,987.53 | |
| 51.58 | **John Foster** income for Medical Students (balance), . . . . . | 172.97 | |
| 5,720.11 | **Lewis** and **Harriet Hayden** (1894), | 5,783.97 | |
| 6,620.22 | **Claudius M. Jones** (1893), . . | 6,704.53 | |
| 5,584.61 | **Alfred Hosmer Linder** (1895), | 5,666.65 | |
| 8,873.85 | **Joseph Pearson Oliver** (1904), | 8,996.99 | |
| 5,819.64 | **Charles B. Porter** (1897), . . . | 5,888.55 | |
| 5,165.88 | **Charles Pratt Strong** (1894), . | 5,326.76 | |
| 6,652.93 | **Isaac Sweetser** (1892), . . . . | 6,738.91 | |
| 5,481.59 | **John Thomson Taylor** (1899), | 5,558.43 | |
| 5,607.60 | **Edward Wigglesworth** (1897), | 5,690.80 | 85,686.76 |
| | PRIZE FUNDS | | |
| 4,146.42 | **Boylston** (1803), . . . . . | $4,268.29 | |
| 8,228.89 | **William H. Thorndike** (1895), | 8,643.90 | 12,912.19 |
| | DENTAL SCHOOL FUNDS | | |
| 14,195.67 | Dental School (balance), . . . . . | $13,017.25 | |
| 2,265.85 | Dental School Endowment (1880), . | 2,265.85 | |
| 23,000.00 | **Henry C. Warren** Endowment (1889), | 23,000.00 | |
| 17,386.79 | Gifts for Building (1892), . . . . | 49,097.02 | |
| 3,150.53 | **Harvard** Dental Alumni (1906), . | 4,184.24 | |
| 563.31 | Dental School Real Estate (balance), | ..... | 91,564.36 |
| | OBSERVATORY FUNDS | | |
| 50,455.00 | Advancement of Astron. Science (1901), | $50,588.03 | |
| 17,829.40 | Advancement of Astron. Science (1902), | 12,771.46 | |
| 5,000.00 | **Thomas G. Appleton** (1884), . | 5,000.00 | |
| 2,500.00 | **J. Ingersoll Bowditch** (1889), . | 2,500.00 | |
| 200,000.00 | **Uriah A. Boyden** (1887), . . . | 200,000.00 | |
| 1,556.67 | **Draper Memorial** (balance), . . | 1,744.91 | |
| 2,000.00 | **Charlotte Harris** (1877), . . . | 2,000.00 | |
| 45,000.00 | **Haven** (1898), . . . . . | 45,000.00 | |
| $15,596,525.22 | . . Amounts carried forward, . . . | $319,604.40 | $15,716,777.72 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $15,596,525.22 | . . Amounts brought forward, . . | $319,604.40 | $15,716,777.72 |
| 21,000.00 | **James Hayward** (1866), . . . | 21,000.00 | |
| 50,000.00 | Observatory Endowment (1882), . | 50,000.00 | |
| 50,000.00 | **Paine** Professorship (1886), . . . | 50,000.00 | |
| 273,932.07 | **Robert Treat Paine** (1886), . . | 273,932.07 | |
| 110,293.88 | **Edward B. Phillips** (1849), . . | 110,293.88 | |
| 15,521.10 | **Josiah Quincy** (1866), . . . . . | 15,746.80 | |
| 41,123.67 | **David Sears** (1845), . . . . . | 42,162.05 | |
| 13,380.00 | **Augustus Story** (1871), . . . . | 13,380.00 | |
| 42.35 | Gift for publishing lunar photographs, | 42.35 | |
| 2,086.96 | **Bond** Gifts (balance), . . . . . | 1,692.35 | 897,853.90 |

## BUSSEY INSTITUTION FUNDS

| | | | |
|---|---|---|---|
| 30,781.07 | **Bussey** Institution (balance), . . | $18,320.69 | |
| 17,783.21 | Woodland Hill (1895), . . . . . | 17,301.84 | 35,622.53 |

## ARNOLD ARBORETUM FUNDS

| | | | |
|---|---|---|---|
| 126,560.00 | **Arnold** Arboretum (1899), . . . . | $127,535.00 | |
| 161,262.07 | **James Arnold** (1872), . . . . . | 161,669.25 | |
| 25,000.05 | Arboretum Construction Gifts (balance), | 22,917.59 | |
| 12,500.00 | **Robert Charles Billings** (1904), | 12,500.00 | |
| 22,984.58 | **William L. Bradley** (1897), . . | 23,819.40 | |
| 2,308.06 | **Bussey** Fund for the **Arnold** Arboretum (1908), . . . . . | 2,308.06 | |
| 20,000.00 | **Francis Skinner** (1906), . . . . | 20,000.00 | |
| 2,482.56 | Gift for books (balance), . . . . . | 506.02 | |
| 11,066.79 | Gift for Expedition to China (balance), | 9,615.04 | 380,870.36 |

## OTHER FUNDS FOR SPECIAL PURPOSES

### PHILLIPS BROOKS HOUSE

| | | | |
|---|---|---|---|
| 10,506.66 | **Phillips Brooks** House Endowment (1901), . . . . . | $10,506.66 | |
| 11,343.64 | **Ralph H. Shepard** (1900), . . . | 11,343.64 | |
| 6,437.36 | **Ralph Hamilton Shepard** Memorial (1898), . . . . . | 6,215.86 | |
| 5,960.38 | **John W. and Belinda L. Randall** (1897), . . . . . | 6,261.36 | 34,327.52 |

### WILLIAM HAYES FOGG ART MUSEUM

| | | | |
|---|---|---|---|
| 105.87 | **Fogg** Art Museum (balance), . . . | $510.08 | |
| 50,000.00 | **William Hayes Fogg** (1892), . | 50,000.00 | |
| 16,634.51 | **Gray** Fund for Engravings (1858), | 16,304.55 | |
| 18,358.41 | **William M. Prichard** (1898), . | 17,774.90 | |
| 35,181.18 | **John Witt Randall** (1892), . . . | 36,047.96 | 120,637.49 |
| $16,761,111.65 | . . Amounts carried forward, . . . . . | | $17,186,089.53 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $16,761,111.65 | . . Amounts brought forward, . . . . . | | $17,186,089.52 |
| | STILLMAN INFIRMARY | | |
| 1,458.04 | **Stillman** Infirmary (balance), . . | ..... | |
| 6,746.15 | **Stillman** Infirmary Gift (balance), | $7,086.82 | |
| 57,644.50 | **Robert Charles Billings,** for **Stillman** Infirmary (1903), . . | 60,555.57 | |
| 6,143.37 | Free Bed Fund of the **Class of 1868** (1898), . . . . . | 6,376.79 | |
| 621.85 | Free Bed Fund for **Stillman** Infirmary (1900), . . . . . | 653.26 | |
| 3,458.70 | **Herbert Schurz** Memorial Free Bed (1903), . . . . . | 3,633.38 | |
| 3,050.18 | **Henry P. Walcott** (1901), . . . | 3,204.16 | 81,509.98 |
| | CLASS FUNDS | | |
| 1,545.90 | Fund of the **Class of 1834** (1887), | $1,614.72 | |
| ..... | " " " **1842** (1908), | 101.66 | |
| 9,027.88 | " " " **1844** (1896), | 9,374.54 | |
| 11,946.20 | " " " **1846** (1905), | 12,549.47 | |
| 3,725.00 | " " " **1853** (1887), | 3,725.00 | |
| 7,885.68 | " " " **1856** (1904), | 7,878.75 | 35,244.14 |
| | GIFTS FOR CONSTRUCTION | | |
| 421.74 | Brighton Marsh Fence (balance), . . | $421.74 | |
| 442.43 | Semitic Building, " . . | 442.43 | |
| 159.47 | **John Simpkins** Hall, " . . | 159.47 | |
| 310,151.24 | **George Smith** Bequest (1904), . | 325,342.42 | |
| 34,400.05 | Gift for a new University Library Building (balance), . . . . . | 10,983.99 | 337,350.05 |
| | SUNDRY FUNDS | | |
| 482,783.15 | **Edward Austin** (1899), . . . . | $484,333.00 | |
| 50,000.00 | **Bright** Legacy (1880), . . . . . | 50,000.00 | |
| 8,915.69 | Bursar's Sundry Accounts (balance), | 10,606.63 | |
| 392,710.18 | **Bussey** Trust (1861), . . . . . | 392,710.18 | |
| 164,840.92 | **Calvin** and **Lucy Ellis** Aid (1899), | 165,206.51 | |
| 3,171.50 | **John Foster** (1840), . . . . . | 3,171.50 | |
| 601,356.70 | Gains and Losses for General Investments (1891), . . . . . | 564,965.92 | |
| 794,942.67 | **Price Greenleaf** (1887), . . . . | 794,942.67 | |
| 29,939.33 | **Henry Harris** (1883), . . . . . | 29,939.33 | |
| 1,524.11 | **Harvard** Memorial Society (1898), | 1,601.07 | |
| 57,430.10 | **Robert Troup Paine** (1880), . . | 59,097.70 | |
| 42,000.00 | **James Savage** (1873), . . . . . | 42,000.00 | |
| 16,572.71 | Gifts for Semitic Museum Collection (balance), . . . . . | 4,020.40 | |
| $19,866,126.99 | . . Amounts carried forward, . . | $2,602,594.91 | $17,640,193.69 |

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| Principal, Aug. 1, 1907. | | Principal, July 31, 1908. | |
|---|---|---|---|
| $19,866,126.99 | . . Amounts brought forward, . . | $2,602,594.91 | $17,640,193.69 |
| 1,050.86 | Gifts for Excavations in Palestine (balance), . . . . . | 1,752.19 | |
| 7.00 | Gifts for Chinese Students (balance), | ..... | |
| 85.96 | Gifts for Cuban Teachers (balance), | 33.96 | |
| 3,895.81 | Sundry balances, . . . . . | 4,883.98 | 2,609,265.04 |

## FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE

| | | | |
|---|---|---|---|
| 16,683.67 | **Daniel Williams** (1716), . . . . | $16,980.68 | |
| 4,800.18 | **Sarah Winslow** (1790), . . . . | 4,807.01 | 21,787.69 |
| $19,892,649.92 | | | $20,271,246.42 |

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## RECEIPTS AND PAYMENTS FOR DEPARTMENTS

The following tables are intended to show in detail the resources and expenditures of each Department of the University. The receipts include every gift and the income of every Fund. The payments include every payment for the specific object of every gift and Fund. The items are stated separately except in the case of payments for a general object such as salaries, in which case the payments are merged under the general heading. These Tables are not found in the Treasurer's books, but are a transcript from the books and form a balanced statement, as shown on page 162.

If the income of a restricted Fund in any year is not wholly used, the surplus is added to the principal and the addition is temporary or permanent according to the terms of the restriction. Thus there may be a surplus in the restricted income of a Department and yet a deficit in its general account. (The general accounts are shown on pages 12 to 22.) If payments on account of a restricted Fund in any year exceed the income available, the excess is treated as a loan or "advance" from General Investments, which must be repaid from the future income of the Fund. If a gift for immediate use is not wholly spent before the end of the year, the balance is included in the statement of "Funds and Balances" beginning on page 71.

The University charge, established by the vote quoted on page 5, has been arrived at in each case as follows. From the payments charged to the University account, and shown in the University Table following, have been excepted the payments met by income specifically restricted to them. The net payments have been reclassified as shown in detail on pages 96–99, and the method or basis of distribution for every class of payments is also there given.



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## Table No. I

## THE UNIVERSITY

### RECEIPTS

| | | |
|---|---|---|
| Gifts for capital account. | | |
| **Riverside** Fund (additional), | | $5,000.00 |
| Income of the following Funds: — | | |
| Band Music, | $57.72 | |
| **Andrew Bigelow,** | 249.98 | |
| **Stanton Blake,** | 252.50 | |
| **Charlotte F. Blanchard,** | 240.94 | |
| **Samuel D. Bradford,** | 265.13 | |
| **James C. Carter,** | 5,050.00 | |
| **John W. Carter,** | 326.20 | |
| **Edward Erwin Coolidge** (part, see p. 106), | 330.10 | |
| **Thomas Cotton,** | 7.83 | |
| **John Cowdin,** | 1,708.67 | |
| **George B. Dorr,** | 3,026.22 | |
| **George Draper,** | 1,264.55 | |
| **R. H. Eddy,** | 1,481.90 | |
| **Harvard Ellis,** | 5,111.86 | |
| **Richard W. Foster,** | 1,262.50 | |
| **John Davis Williams French,** | 138.88 | |
| **Gore,** | 1,038.84 | |
| **John C. Gray,** | 652.39 | |
| **Henry Harris** (½ income, see p. 132), | 755.96 | |
| **Walter Hastings,** | 496.42 | |
| **Henry L. Higginson,** | 1,010.00 | |
| **George Baxter Hyde,** | 252.50 | |
| **Leonard Jarvis,** | 852.04 | |
| **Henry P. Kidder,** | 505.00 | |
| **Joseph Lee,** | 260.96 | |
| **Theodore Lyman,** | 505.00 | |
| **Israel Munson,** | 795.38 | |
| **Henry S. Nourse** (part, see p. 157), | 1,541.07 | |
| **Francis E. Parker,** | 2,970.14 | |
| **William Perkins,** | 1,515.00 | |
| President's, | 3,219.02 | |
| **Henry L. Pierce** (part, see p. 124), | 579.74 | |
| Retiring Allowance, | 18,504.01 | |
| **John L. Russell,** | 1,180.19 | |
| **Isaac Sweetser,** | 2,369.11 | |
| **Seth Turner,** | 252.50 | |
| **William F. Weld,** | 2,609.58 | 62,639.83 |
| Gift from the **Carnegie** Foundation, to pay retiring allowances granted to persons connected with **Harvard** University, | $13,478.38 | |
| Amounts carried forward, | $13,478.38 | $67,639.83 |

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## TABLE NO. I, THE UNIVERSITY, CONTINUED

### RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, | $18,478.38 | $67,639.88 |
| Gifts for immediate use, | 22.00 | |
| Repayment of expenses of Inspector of Grounds and Buildings on account of construction of the Antitoxin Stable, | 600.00 | |
| Care of the Sarah Winslow Fund, | 6.06 | |
| Sale of catalogues, calendars, directories, &c., | 1,049.76 | |
| " wood, | 87.25 | |
| Use of houses by College officers, | 1,550.00 | |
| Use of land by Harvard Union, | 1,260.00 | |
| Repayment for expenses, in excess of cost, | 33.30 | 18,086.75 |
| | | $85,726.58 |

### PAYMENTS

(See also pp. 89 and 96-99.)

| | | | |
|---|---|---|---|
| **Overseers' Expenses.** | | | |
| Printing President's Annual Report, | | $1,267.37 | |
| " Treasurer's " " | | 497.24 | |
| " other reports, ballots, etc., | | 160.77 | |
| Advertising, | | 81.20 | |
| Auditing Treasurer's accounts, | | 150.00 | |
| Other expenses, | | 34.02 | $2,190.60 |
| **Office Expenses of** | | | |
| President, | | | |
| Clerical services, | $1,485.91 | | |
| Other expenses, | 868.91 | $2,354.82 | |
| Treasurer, | | | |
| Clerical services, | $2,771.90 | | |
| Rent of safes, | 600.00 | | |
| Other expenses, | 1,196.38 | 4,568.28 | |
| Bursar, | | | |
| Clerical services, | $5,791.69 | | |
| Other expenses, | 1,850.39 | 7,642.08 | |
| Publication Agent, | | | |
| Clerical and other services, | $2,668.15 | | |
| Postage and stationery, | 1,342.56 | | |
| Other expenses, | 707.45 | 4,718.16 | |
| Inspector of Grounds and Buildings, | | | |
| Clerical and other services, | $841.17 | | |
| Improvements and repairs, | 9.41 | | |
| Other expenses, | 353.45 | 1,204.03 | |
| Janitor, sundry expenses, | | 71.83 | |
| Corporation's Rooms (fuel, rent, &c.), | | 2,557.15 | 23,116.35 |
| Amount carried forward, | | | $25,306.95 |

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## Table No. I, The University, continued

### PAYMENTS

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $25,806.95 |
| **Salaries.** | | | |
| President, | | | |
| From the University, | $6,000.00 | | |
| " President's Fund, | 3,124.72 | | |
| " Thomas Cotton Fund, | 7.61 | $9,132.33 | |
| Treasurer, | | 6,000.00 | |
| Comptroller, | | 2,500.00 | |
| Bursar, | | 4,000.00 | |
| Assistant Bursar, | | 2,250.00 | |
| Secretary to the Corporation, | | 3,000.00 | |
| Assistant Secretary to the Corporation, | | 1,404.12 | |
| Secretary of the Board of Overseers, | | 200.00 | |
| Commencement Marshal, | | 100.00 | |
| Secretary for Appointments, | | 1,500.00 | |
| Regent, | | 1,000.00 | |
| Medical Visitor, | | 3,500.00 | |
| Publication Agent, | | 2,026.26 | |
| Inspector of Grounds and Buildings, | | 3,500.00 | |
| Clerks, Treasurer's office, | | 3,498.08 | |
| Bursar's Assistant, | | 2,000.00 | 45,610.79 |
| **Retiring Allowances.** | | | |
| From **Carnegie** Foundation (gift), | | $13,478.38 | |
| " Retiring Allowance Fund, | | 18,504.01 | |
| " University income, | | 1,042.28 | 33,024.67 |
| **Memorial Hall and Sanders Theatre.** | | | |
| Janitor service, | | $221.48 | |
| Lighting, | | 24.49 | |
| Heating, | | 3.63 | |
| Furniture, | | 47.35 | |
| Repairs, | | 439.22 | |
| Other expenses, | | 52.70 | 788.87 |
| **Payments made from University income on the following accounts: —** | | | |
| **Appleton** Chapel (part, see Table XIX, page 153), | | $6,580.32 | |
| **Phillips Brooks** House (part, see Table XX, page 154), | | 1,515.31 | |
| **William Hayes Fogg** Art Museum (part, see Table XVII, page 151), | | 2,495.14 | |
| **Peabody** Museum of American Archaeology and Ethnology (part, see Table XIV, page 148), | | 1,411.49 | |
| **Semitic** Museum (part, see Table XV, page 149), | | 1,693.76 | 13,696.02 |
| Amount carried forward, | | | $118,427.30 |

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## TABLE NO. I, THE UNIVERSITY, CONTINUED

### PAYMENTS

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $118,427.30 |
| General Expenses. | | | |
| Labor, | | $7,309.14 | |
| Watchmen, | | 2,108.78 | |
| University Gazette, | | 956.00 | |
| Annual Catalogue, | | 3,793.92 | |
| Quinquennial Catalogue, | | 637.45 | |
| University Guide Book, | | 307.31 | |
| Expenses of Medical Adviser. | | | |
| Clerical and other services, | $535.00 | | |
| Improvements to office, | 338.58 | | |
| Furniture, | 171.43 | | |
| Supplies, | 159.10 | | |
| Telephone, | 62.59 | 1,266.70 | |
| Diplomas, | | 28.32 | |
| Commencement Day expenses, | | 826.26 | |
| Association of American Universities, conference, | | 157.30 | |
| Other hospitality, | | 268.54 | |
| Legal services, | | 210.00 | |
| Advertising, | | 165.25 | |
| Insurance, | | 87.50 | |
| Telephone, | | 80.83 | |
| Mercantile agency, | | 850.00 | |
| Fence, | | 894.80 | |
| Plank walks, | | 120.86 | |
| Driveways and gravel walks, | | 284.13 | |
| Watering driveways and streets, | | 688.09 | |
| Repairs and improvements, | | 718.07 | |
| Taxes on Harvard Union, | $4,794.00 | | |
| Less repaid by Harvard Union, | 4,794.00 | | |
| Chemical engine and horses presented to the City of Cambridge, | | 2,321.00 | |
| Freight, supplies, and sundries, | | 1,317.37 | |
| Taxes on 38 Quincy St., | $402.32 | | |
| Less repaid, | 402.32 | | |
| Travelling expenses of delegates, | | 500.00 | |
| Lecture, | | 35.00 | |
| Meetings of Zoölogical Congress, | | 385.02 | |
| " Congress of Liberal Religions, | | 150.76 | 26,368.40 |
| | | | $144,795.70 |
| Less amount distributed as "University charge" (see p. 89). | | | |
| To University (p. 95), | | $24,324.13 | |
| " College (p. 122), | | 60,202.34 | |
| " Library (p. 126), | | 1,863.44 | |
| Amounts carried forward, | | $86,389.91 | $144,795.70 |

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## Table No. I, The University, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $86,389.91 | $144,795.70 |
| Less amount distributed, etc. (*continued*). | | |
| To Divinity School (p. 129), . . . . . | 2,181.92 | |
| " Law School (p. 131), . . . . . | 7,165.07 | |
| " Medical School (p. 137), . . . . . | 5,583.09 | |
| " Dental School (p. 138), . . . . . | 612.87 | |
| " Bussey Institution (p. 139), . . . . . | 378.72 | |
| " Arnold Arboretum (p. 141), . . . . . | 474.69 | |
| " Botanic Garden and Botanical Museum (p. 142), | 149.93 | |
| " Gray Herbarium (p. 143), . . . . . | 141.66 | |
| " Observatory (p. 144), . . . . . | 2,810.44 | |
| " Jefferson Physical Laboratory (p. 152), . . . . | 238.99 | |
| " Stillman Infirmary (p. 156), . . . . . | 1,205.35 | |
| " Summer Schools in Cambridge (p. 118), . . . | 656.09 | |
| " Classical Publication Fund of the Class of 1856 (p. 116), . . . . . | 253.94 | |
| " Annals of Mathematics (p. 116), . . . . . | 208.26 | |
| " Suspense account, . . . . . | 80.29 | 108,031.22 |
| The remainder consists of those payments which were met by income specifically restricted to them, as follows: — | | |
| Retiring allowances, the part met by | | |
| Carnegie Foundation, gift, . . . . . | $13,478.38 | |
| Retiring Allowance Fund, income, . . . . . | 18,504.01 | |
| President's salary, the part met by | | |
| President's Fund, income of last year, . . . . | 3,124.72 | |
| Thomas Cotton Fund, income of last year, | 7.61 | |
| Inspector of Grounds and Buildings, expenses met by | | |
| Repayment from Antitoxin Stable, . . . . . | 600.00 | |
| Quinquennial Catalogue, the part met by | | |
| Sales, . . . . . | 98.55 | |
| Annual Catalogue, the part met by | | |
| Sales, . . . . . | 677.01 | |
| University Gazette, the part met by | | |
| Sales, . . . . . | 217.70 | |
| University Guide Book, the part met by | | |
| Sales, . . . . . | 56.50 | $36,764.48 |
| Amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted. | | |
| Veterinary School, . . . . . | $433.99 | |
| Miscellaneous, . . . . . | 30.00 | 463.99 |
| University charge (see p. 89). | | |
| Overseers' expenses and salary of Secretary, . . . | $2,846.18 | |
| 20% Corporation's Rooms at 50 State Street, Boston (rent, fuel, etc.) . . . . . | 511.42 | |
| Amounts carried forward, . . . . . | $3,357.60 | $37,228.47 |

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## Table No. I, The University, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, | $3,357.60 | $37,228.47 |
| University charge (*continued*). | | |
| 10% President's Office, salaries and expenses, | 1,289.13 | |
| Part of Treasurer's Office expenses, for keeping the Corporation's Records, etc., | 750.00 | |
| Treasurer's Office, care of investments of University Funds, | 1,335.12 | |
| Class Funds, | 32.17 | |
| Harvard Memorial Society Fund, | 1.50 | |
| Bursar's Office, collections and payments, | 370.08 | |
| Commencement Marshal, | 100.00 | |
| Other expenses of Commencement Day, | 857.73 | |
| 42% Quinquennial Catatogue, | 226.34 | |
| 16% Annual Catalogue, | 642.38 | |
| University Gazette, | 964.55 | |
| Advertising, | 165.25 | |
| Repairs and improvements, 16 and 38 Quincy Street, | 520.28 | |
| Diplomas, | 28.32 | |
| Receptions, | 268.54 | |
| International Zoölogical Congress, | 385.02 | |
| Conference, Association of American Universities, | 157.30 | |
| Labor, | 1,359.50 | |
| Watering streets and driveways, | 688.09 | |
| Repairs to drains, hydrants and lamps in the College Yard, | 65.39 | |
| Janitor's Office, expenses, | 73.96 | |
| Freight, supplies, and sundries, | 1,385.70 | |
| University Houses and Lands, | 1,356.33 | |
| 10%, Memorial Hall and Sanders Theatre, expenses for the building, | 89.94 | |
| Retiring Allowances, | 39.59 | |
| Inspector of Grounds and Buildings, salary and expenses, | 84.45 | |
| Museum of Comparative Zoölogy (part, see p. 146), | 1,955.21 | |
| Peabody Museum of American Archaeology and Ethnology (part, see p. 148), | 1,656.52 | |
| Semitic Museum (part, see p. 149), | 1,257.63 | |
| Germanic Museum (part, see p. 150), | 90.19 | |
| William Hayes Fogg Art Museum (part, see p. 151), | 270.06 | |
| Appleton Chapel (part, see p. 153), | 1,342.68 | |
| Phillips Brooks House (part, see p. 155), | 161.78 | |
| French lecture by E. Rossier, | 35.00 | |
| University Guide Book, | 250.81 | |
| Legal Services, | 210.00 | |
| Travelling expenses of delegates, | 500.00 | 24,324.13 |
| | | $61,552.60 |

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TABLE NO. I, ADDITIONAL (SEE PAGE 89)

## UNIVERSITY PAYMENTS RECLASSIFIED FOR DISTRIBUTION

Whenever it has been necessary to enter in this Table an amount already included in some other entry in the Table, the amount so entered again has been shown also in the left hand column, and the total of such amounts has been deducted at the end.

| | | | |
|---|---|---|---|
| | **Overseers' Expenses.** | | |
| | Secretary's salary, . . . . . | $200.00 | |
| $455.58 | Publication Office, . . . . . | 455.58 | |
| | Other expenses, . . . . . | 2,190.60 | $2,846.18 |
| | Transferred to University. | | |
| | **President's Office.** | | |
| | Salaries. | | |
| | President (excluding portion paid from restricted income), (see p. 92), . . . . . | $6,000.00 | |
| | Secretary to the Corporation, . . . . . | 3,000.00 | |
| | Assistant Secretary to the Corporation, . . | 1,404.12 | |
| | Office expenses, . . . . . | 2,354.82 | |
| 132.40 | Repairs to President's house and stable, . . | 132.40 | 12,891.34 |
| | Transferred 10% to University, 90% to Departments in proportion to the number of students. | | |
| | **Treasurer's Office.** | | |
| | Salaries. | | |
| | Treasurer, . . . . . | $6,000.00 | |
| | Comptroller, . . . . . | 2,500.00 | |
| | Other salaries, . . . . . | 3,498.08 | |
| | Office expenses, . . . . . | 4,568.28 | |
| 30.77 | Publication Office, . . . . . | 30.77 | |
| 2,045.73 | 80% Corporation's Rooms, 50 State Street, . | 2,045.73 | 18,642.86 |
| | Transferred: $750 to University for the keeping of the Corporation's Records, etc.; remainder to Departments at the rate of 2.44985 per cent. of the income of their Funds. | | |
| | **Bursar's Office.** | | |
| | Salaries. | | |
| | Bursar, . . . . . | $4,000.00 | |
| | Assistant Bursar, . . . . . | 2,250.00 | |
| | Bursar's Assistant, . . . . . | 2,000.00 | |
| | Office expenses, . . . . . | 7,642.08 | |
| | Subscription to a Mercantile Agency, . . . . | 850.00 | |
| 121.17 | Publication Office, . . . . . | 121.17 | 16,863.25 |
| | Transferred: $800 to College for letting College rooms, the remainder to Departments in proportion to the Bursar's collections and payments, at the rate of 0.5632 per cent. of the total collections and payments for each. | | |
| $2,785.65 | Amounts carried forward, . . . . . | | $51,243.63 |

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## Table No. I, Additional, continued

### University Payments Reclassified, continued

| | | | |
|---|---|---|---|
| $2,785.65 | Amounts brought forward, | | $51,243.63 |
| | **Publication Office.** | | |
| | Publication Agent's salary, | $2,026.26 | |
| | Office expenses, | 4,718.16 | 6,744.42 |
| | Transferred to Departments, and to certain accounts with publications, in proportion to the amounts charged to them for printing. | | |
| | **Inspector's Office.** | | |
| | Inspector's salary, | $3,500.00 | |
| | Office expenses, | 1,204.08 | |
| 6.15 | Publication Office, | 6.15 | |
| | | $4,710.18 | |
| | Less amount credited (p. 91), | 600.00 | 4,110.18 |
| | Transferred to Departments in proportion to the floor area of buildings in the Inspector's charge. | | |
| | **Janitor's Office.** | | |
| | Sundry expenses, | $71.83 | |
| 2.13 | Publication Office, | 2.13 | 73.96 |
| | Transferred to University. | | |
| | **Corporation's Office.** | | |
| | Fuel, rent, etc., | | 2,557.15 |
| | Transferred 20% to University and 80% to Treasurer's Office. | | |
| | **Medical Adviser's Office.** | | |
| | Medical Adviser's salary, | $3,500.00 | |
| | Sundry expenses, | 1,266.70 | 4,766.70 |
| | Transferred: $750 to Stillman Infirmary, the remainder to College, Divinity School and Law School in proportion to the number of students. | | |
| | **Regent's Office.** | | |
| | Regent's salary, | | 1,000.00 |
| | Transferred to College, Divinity School and Law School in proportion to the number of students. | | |
| | **Retiring Allowances.** | | |
| | Total payments, | $33,024.67 | |
| | Less payments met by: | | |
| | Income of Retiring Allowance Fund, | $18,504.01 | |
| | Gift of the Carnegie Foundation, | 13,478.38 | 31,982.39 1,042.28 |
| | Transferred to Departments in proportion to the amount of retiring allowances paid to their officers. | | |
| $2,793.93 | Amounts carried forward, | | $71,538.82 |

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## Table No. I, Additional, continued

### University Payments Reclassified, continued

| | | | |
|---|---|---|---|
| $2,785.65 | Amounts brought forward, | | $71,538.32 |
| | **Annual Catalogue.** | | |
| | Printing, | $3,793.92 | |
| 897.90 | Publication Office, | 897.90 | |
| | | $4,691.82 | |
| | Less sales, | 677.01 | 4,014.81 |
| | Transferred to Departments in proportion to space taken. | | |
| | **Quinquennial Catalogue.** | | |
| | Printing, | $637.45 | |
| | Less sales, | 98.55 | 538.90 |
| | Transferred to Departments in proportion to space taken. | | |
| | **Repairs and Improvements.** | | |
| | Sundry expenses, | | 718.07 |
| | Transferred: $132.40 to President's Office and remainder to University. | | |
| | **Watchmen.** | | |
| | Total expenses, | | 2,108.78 |
| | Transferred in proportion to the floor area of the buildings. | | |
| | **Labor.** | | |
| | Total, | | 7,309.14 |
| | Transferred: 18.6% to University, 64.6% to College, 3.5% to Divinity School, 2.6% to Law School, 1.1% to Stillman Infirmary, 1.0% to Randall Hall, 8.6% to University Houses and Lands. | | |
| | **Sundries chargeable to the University.** | | |
| | Commencement Marshal, | $100.00 | |
| | Commencement Day. | | |
| | Sundry expenses, | $826.26 | |
| 31.47 | Publication Office, | 31.47 | 857.73 |
| | Diplomas, | | 28.33 |
| | Advertising, | | 165.25 |
| | University Gazette. | | |
| | Printing, | $956.00 | |
| 226.25 | Publication Office, | 226.25 | |
| | | $1,182.25 | |
| | Less sales, | 217.70 | 964.55 |
| | University Guide Book. | | |
| | Printing, | $307.31 | |
| | Less sales, | 56.50 | 250.81 |
| | Receptions, | | 268.54 |
| | International Zoölogical Congress, | | 385.02 |
| | Conference, Assoc. of Am. Universities, | | 157.30 |
| | Watering streets and driveways, | | 688.09 |
| | Travelling expenses of delegates, | | 500.00 |
| $3,949.55 | Amounts carried forward, | $4,356.61 | $86,238.02 |

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## Table No I, Additional, continued

### University Payments Reclassified, continued

| | | | |
|---|---|---|---|
| $3,949.55 | Amounts brought forward, . . . . . | $4,365.61 | $86,228.02 |
| | **Sundries to the University** (*continued*). | | |
| | Cost of French lectures, . . . . . | 35.00 | |
| | Legal services, . . . . . | 210.00 | |
| | Freight, supplies and sundries, . . . . . | 1,385.70 | 5,996.31 |
| | Transferred to University. | | |
| | **Sundries chargeable to the College.** | | |
| | Secretary for Appointments, salary, . . . . | $1,500.00 | |
| | Plank walks, . . . . . | 120.86 | |
| | Driveways and gravel walks, . . . . . | 284.13 | |
| | Expenses on fences, painting, etc., . . . . . | 894.80 | |
| | Fire engine and horses presented to the City of Cambridge, . . . . . | 2,321.00 | 5,120.79 |
| | Transferred to College. | | |
| | **Sundries chargeable to the Divinity School.** | | |
| | Congress of Liberal Religions, . . . . . | | 150.76 |
| | Transferred to Divinity School. | | |
| | **Harvard Dining Association.** | | |
| 2,149.87 | Bursar's Office, collections and payments, . | $2,149.87 | |
| 87.78 | Inspector of Grounds and Buildings, . . . . | 87.78 | 2,237.65 |
| | Transferred to College, Divinity School and Law School in proportion to the number of students. | | |
| | **Memorial Hall.** | | |
| 40.57 | Inspector of Grounds and Buildings, . . . . | $40.57 | |
| 69.95 | Watchmen, . . . . . | 69.95 | |
| | Sundry expenses for the building, . . . . . | 788.87 | 899.39 |
| | Transferred: 10% to University, 90% to College. | | |
| | **Randall Hall Association.** | | |
| 954.50 | Bursar's Office, collections and payments, . . | $954.50 | |
| 73.49 | Inspector of Grounds and Buildings, . . . . | 73.49 | |
| 73.09 | Labor, . . . . . | 73.09 | |
| 40.08 | Watchmen, . . . . . | 40.08 | 1,141.16 |
| | Transferred to College, Divinity School and Law School in proportion to the number of students. | | |
| | **Other Payments** (see p. 92). | | |
| | Appleton Chapel, . . . . . | $6,580.32 | |
| | Phillips Brooks House, . . . . . | 1,515.31 | |
| | William Hayes Fogg Art Museum, . . . . . | 2,495.14 | |
| | Peabody Museum of American Archaeology and Ethnology, . . . . . | 1,411.49 | |
| | Semitic Museum, . . . . . | 1,693.76 | 13,696.02 |
| | Transferred as shown in the Tables on the pages referred to above. | | |
| | Total, . . . . . | | $115,470.10 |
| $7,488.88 | Total of amounts included more than once, deduct, . . | | 7,488.88 |
| | **Amount distributed as University charge** (as also shown on p. 94), . . . . . | | $108,031.22 |

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## Table No. II

## THE COLLEGE

### RECEIPTS

| | | |
|---|---|---|
| **Gifts** for Capital Account. | | |
| **George Newhall Clark** Scholarship Fund, . . | $10,000.00 | |
| Fund of the **Class of 1842,** . . . . . | 100.95 | |
| Twenty-fifth Anniversary Fund of the **Class of 1881** (additional), . . . . . | 9,055.03 | |
| Fund of the **Class of 1882** (additional), . . . . | 15,676.30 | |
| **Class of 1883** Fund, . . . . . | 80,510.63 | |
| " " Special Fund, . . . . . | 250.00 | |
| **Priscilla Clark Hodges** Scholarship Fund, . . | 4,000.00 | |
| **Arthur T. Lyman** Fund (additional), . . . . . | 25,000.00 | |
| Boston Newsboys' Fund (additional), . . . . . | 245.74 | |
| **Mary P. Ropes** Fund, . . . . . | 47,576.87 | |
| **Shaler** Memorial Fund (additional), . . . . . | 89.40 | |
| Teachers' Endowment Fund (additional), . . . . . | 61,542.82 | |
| **Jerome Wheelock** Fund (additional), . . . . | 10.00 | $254,057.64 |
| **Funds** re-established. | | |
| Nine Funds, established by gift or bequest between 1650 and 1777, whose capital was spent contrary to the letter or the spirit of the terms upon which the Funds were received, now re-established from current income of the College. | | |
| **John Newgate** (1650), . . . . . | $333.33 | |
| **John Coggan** (1652), . . . . . | 1,500.00 | |
| **Daniel Russell** (1679), . . . . . | 1,514.00 | |
| **Nathaniel Hulton** (1695), . . . . . | 444.44 | |
| **Ezekiel Rogers** (1701), . . . . . | 3,534.00 | |
| **Thomas Hollis** (for Treasurer) (1721), . . . . | 520.00 | |
| **Thomas Hutchinson** (1739), . . . . . | 333.33 | |
| **Thomas Hubbard** (1774), . . . . . | 1,000.00 | |
| **John Barnard** (1777), . . . . . | 666,67 | 9,746.77 |
| **Income of Funds for Instruction, and Gifts for Salaries.** | | |
| **Alford** Professorship, . . . . . | $1,401.32 | |
| **John B. Barringer,** . . . . . | 1,549.69 | |
| **Boylston** Professorship, . . . . . | 1,431.02 | |
| **Martin Brimmer,** . . . . . | 2,525.00 | |
| **Class of 1880,** . . . . . | 5.235.28 | |
| **Class Subscription,** . . . . . | 7,607.22 | |
| **Paul Dudley,** . . . . . | 194.63 | |
| **Eaton** Professorship, . . . . . | 5,390.67 | |
| **Eliot** Professorship, . . . . . | 1,091.81 | |
| **Eliot** " (**Jon. Phillips'** Gift), . . . | 350.00 | |
| **Calvin** and **Lucy Ellis** Aid (part, see p. 106), . . | 5,519.77 | |
| Amounts carried forward, . . . . . | $32,296.41 | $263,804.41 |

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## Table No. II, The College, continued

### RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $32,296.41 | $263.804.41 |
| **Income of Funds for Instruction, and Gifts for Salaries** (*continued*). | | |
| **Erving** Professorship, . . . . . | 176.75 | |
| **Fisher** " . . . . . | 1,817.55 | |
| **Henry Flynt,** . . . . . | 21.92 | |
| Fund for Permanent Tutors, . . . . . | 820.12 | |
| **Godkin** Lecture, . . . . . | 718.21 | |
| Gospel Church (½ income, see p. 157), . . . . . | 179.80 | |
| **Asa Gray** Professorship, . . . . . | 1,084.59 | |
| **Gurney** (part, see p. 157), . . . . . | 9,412.57 | |
| **Hersey** Professorship (⅓ income, see p. 132), . | 612.58 | |
| **Hersey** Professorship (**Thomas Lee's gift**), . | 1,098.07 | |
| **Hollis** " (Divinity), . . . . . | 1,743.16 | |
| **Hollis** " (Mathematics), . . . . . | 189.23 | |
| **Ingersoll** Lecture, . . . . . | 303.35 | |
| **Abbott Lawrence,** . . . . . | 3,107.57 | |
| **James Lawrence,** . . . . . | 2,543.94 | |
| Lectures on Political Economy, . . . . . | 545.70 | |
| **Henry Lee** Professorship, . . . . . | 5,554.45 | |
| **Thomas Lee,** for Reading, . . . . . | 797.75 | |
| **Arthur T. Lyman,** . . . . . | 1,262.50 | |
| **McLean** Professorship, . . . . . | 2,174.68 | |
| **William Belden Noble** Lectures. | | |
| Interest, . . . . . $1,299.87 | | |
| Sales, . . . . . 2.07 | 1,301.94 | |
| **Francis Greenwood Peabody** (part, see p. 108), . . . . . | 2,550.00 | |
| **Daniel H. Peirce,** . . . . . | 727.40 | |
| **Perkins** Professorship, . . . . . | 1,060.50 | |
| **Plummer** Foundation, . . . . . | 1,263.51 | |
| **Pope** Professorship, . . . . . | 2,651.25 | |
| Professorship of Engineering, . . . . . | 2,060.70 | |
| Professorship of Hygiene (part, see p. 157), . . | 9,043.39 | |
| **Nelson Robinson Jr.** (part, see pp. 102, 108), | 20,210.61 | |
| " " " Additional (part, see p. 108), | 1,000.00 | |
| **Mary P. Ropes,** . . . . . | 80.55 | |
| **Arthur Rotch,** . . . . . | 1,262.50 | |
| **Rumford** Professorship, . . . . . | 2,846.64 | |
| **Gurdon Saltonstall,** . . . . . | 3,030.00 | |
| **Smith** Professorship, . . . . . | 1,168.57 | |
| **Josiah Stickney,** . . . . . | 595.50 | |
| Teachers' Endowment, . . . . . | 97,884.49 | |
| Unknown Memorial (part, see p. 108), . . . . . | 3,333.07 | |
| **Henry Villard,** . . . . . | 1,304.79 | |
| Amounts carried forward, . . . . . | $219,836.31 | $263,804.41 |

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TABLE No. II, THE COLLEGE, CONTINUED

RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $219,836.31 | $263,804.41 |
| Income of Funds for Instruction, and Gifts for Salaries (*continued*). | | |
| **Henry W. Wales.** | | |
| **Wales** Professorship, . . . . . | 1,608.67 | |
| **Henry C. Warren,** . . . . . | 8,891.33 | |
| **Sylvester Waterhouse,** . . . . . | 341.23 | |
| **David A. Wells** (part, see p. 108), . . . . . | 4,500.00 | |
| **Jerome Wheelock,** . . . . . | 2.58 | |
| Gifts for salaries and lectures, . . . . . | 4,155.00 | 234,835.12 |
| Income of Funds for General Purposes. | | |
| **John W. P. Abbot** (accumulating), . . . . | $571.15 | |
| **William H. Baldwin, Jr.** . . . . . | 101.00 | |
| **John A. Blanchard,** . . . . . | 53.03 | |
| **Edward W. Codman,** . . . . . | 16,015.30 | |
| **Jonathan Phillips,** . . . . . | 1,590.75 | |
| **William M. Spackman,** . . . . . | 126.25 | |
| Fund of the **Class of 1882,** . . . . . | 2,904.86 | |
| **Class of 1883,** . . . . . | 333.40 | |
| Fund of the **Class of 1842,** . . . . . | .71 | |
| Twenty-fifth Anniversary Fund of the **Class of 1881,** . . . . . | 5,214.13 | 26,910.58 |
| Income of Fellowship Funds, and Gifts for Fellowships. | | |
| **Julia Amory Appleton,** . . . . . | $992.23 | |
| **Edward Austin** (part, see pp. 103, 105, 132). | | |
| **Edward Austin** Fellowships, . . . . . | 2,000.00 | |
| **Austin** Teaching " . . . . . | 13,615.00 | |
| Cercle Français de l'Université **Harvard** (gift), | 600.00 | |
| **George W. Dillaway,** . . . . . | 275.78 | |
| **Ozias Goodwin** Memorial, . . . . . | 592.37 | |
| **Harris,** . . . . . | 553.48 | |
| **Edward William Hooper,** . . . . . | 1,295.17 | |
| **John Thornton Kirkland,** . . . . . | 561.21 | |
| **Henry Lee** Memorial, . . . . . | 611.10 | |
| **Charles Eliot Norton,** . . . . . | 600.76 | |
| **Robert Treat Paine,** . . . . . | 669.02 | |
| **John Parker,** . . . . . | 3,015.81 | |
| **Francis Parkman,** . . . . . | 522.78 | |
| **Nelson Robinson Jr.** (part, see pp. 101, 108). | | |
| **Nelson Robinson Jr.** Fellowship, . . . | 1,500.00 | |
| **Rogers,** . . . . . | 1,677.81 | |
| **Henry Bromfield Rogers** Memorial, . . . | 625.90 | |
| South End House (gifts), . . . . . | 300.00 | |
| South End House Fellowship in Social Education (gifts), . . . . . | 225.00 | |
| Amounts carried forward, . . . . | $30,233.42 | $525,050.11 |

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## Table No. II, The College, continued

### RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $30,233.42 | $525,050.11 |
| **Income of Fellowship Funds, and Gifts for Fellowships** (*continued*). | | |
| **John Tyndall,** . . . . . | 608.93 | |
| **James Walker,** . . . . . | 587.52 | |
| **Whiting,** . . . . . | 1,233.26 | 32,663.13 |
| **Income of Scholarship Funds, and Gifts for Scholarships.** | | |
| **Abbot,** . . . . . | $196.29 | |
| **Alford** (accumulating), . . . . . | 120.70 | |
| **Edward Austin** (part, see pp. 102, 105, 132). | | |
| **Austin** Scholarships in Architecture, . . . | 450.00 | |
| " " for Teachers, . . . . | 2,950.00 | |
| **Bartlett,** . . . . . | 273.81 | |
| **Bassett,** . . . . . | 287.40 | |
| **Bigelow,** . . . . . | 684.07 | |
| **Borden** (accumulating), . . . . . | 150.74 | |
| **Bowditch,** . . . . . | 5,831.89 | |
| **Bright** Scholarships. | | |
| Interest on balance, . . . . . $205.13 | | |
| **Bright** Legacy (½ income, see p. 122), 1,262.50 | 1,467.63 | |
| **Browne,** . . . . . | 200.08 | |
| **Morey Willard Buckminster,** . . . . . | 278.25 | |
| **Burr,** . . . . . | 1,756.14 | |
| **Ruluff Sterling Choate,** . . . . . | 313.55 | |
| **George Newhall Clark,** . . . . . | 250.00 | |
| **Class of 1802,** . . . . . | 434.05 | |
| " **1814,** . . . . . | 167.26 | |
| " **1815 (Kirkland),** . . . . . | 343.91 | |
| " **1817,** . . . . . | 239.32 | |
| " **1828,** . . . . . | 180.34 | |
| " **1835,** . . . . . | 261.64 | |
| " **1841,** . . . . . | 268.10 | |
| " **1852 (Dana),** . . . . . | 268.05 | |
| " **1856,** . . . . . | 823.71 | |
| " **1867,** . . . . . | 249.52 | |
| " **1877,** . . . . . | 265.73 | |
| " **1883,** . . . . . | 313.55 | |
| **Crowninshield,** . . . . . | 627.51 | |
| **Warren H. Cudworth** (gift), . . . . . | 600.00 | |
| **Francis H. Cummings,** . . . . . | 312.34 | |
| **George and Martha Derby,** . . . . . | 283.86 | |
| **Julius Dexter,** . . . . . | 266.13 | |
| **Orlando W. Doe,** . . . . . | 148.22 | |
| **William Samuel Eliot,** . . . . . | 280.38 | |
| **George H. Emerson** (part, see p. 157), . . | 1,385.92 | |
| Amounts carried forward, . . . . | $22,930.09 | $557,713.24 |

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TABLE NO. II, THE COLLEGE, CONTINUED

RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $22,930.09 | $557,713.24 |
| Income of Scholarship Funds, and Gifts for Scholarships (*continued*). | | | |
| **Joseph Eveleth** (part, see p. 133), . . . . . | | 1,535.04 | |
| Fall River, . . . . . | | 113.57 | |
| **Farrar,** . . . . . | | 327.54 | |
| **Richard Augustine Gambrill,** . . . . . | | 596.66 | |
| **Charles Haven Goodwin,** . . . . . | | 399.56 | |
| **Benjamin D. Greene,** . . . . . | | 226.09 | |
| **Price Greenleaf** (part, see pp. 106, 123, 124). | | | |
| **Price Greenleaf** Scholarships, . . . . . | | 3,000.00 | |
| **Harvard** Club of Chicago (gift), . . . . . | | 300.00 | |
| " " Cleveland " . . . . . | | 400.00 | |
| " " St. Louis " . . . . . | | 300.00 | |
| " " San Francisco (gift), . . . . | | 400.00 | |
| **John Appleton Haven,** . . . . . | | 529.14 | |
| **William Hilton** (part, see p. 133), . . . . . | | 796.59 | |
| **Ebenezer Rockwood Hoar,** . . . . . | | 562.57 | |
| **Levina Hoar,** for the town of Lincoln, . . . . | | 329.66 | |
| **Priscilla Clark Hodges,** . . . . . | | 176.75 | |
| **R. M. Hodges** (part, see p. 123). | | | |
| **Hodges** Scholarship, . . . . . | | 307.49 | |
| **Hollis,** . . . . . | | 328.20 | |
| **Henry B. Humphrey,** . . . . . | | 561.46 | |
| **Hennen Jennings,** . . . . . | | 563.73 | |
| **Charles L. Jones,** . . . . . | | 1,600.95 | |
| **Henry Weidemann Locke** (gift), . . . . | | 100.00 | |
| **George Emerson Lowell,** . . . . . | | 543.88 | |
| **Markoe,** . . . . . | | 279.57 | |
| **Matthews** Scholarships. | | | |
| Interest on balance, . . . . . | $216.19 | | |
| **Matthews** Hall, half net rents, . . | 4,868.72 | 5,084.91 | |
| **William Merrick,** . . . . . | | 323.65 | |
| **Morey,** . . . . . | | 432.08 | |
| **Lady Mowlson,** . . . . . | | 303.35 | |
| Boston Newsboys'. | | | |
| Income, . . . . . | $138.98 | | |
| Gift, . . . . . | 50.00 | 188.98 | |
| **Howard Gardner Nichols,** . . . . . | | 296.38 | |
| **Lucy Osgood,** . . . . . | | 312.34 | |
| **George Foster Peabody,** . . . . . | | 325.05 | |
| **Pennoyer,** . . . . . | | 355.32 | |
| **Rebecca A. Perkins,** . . . . . | | 229.93 | |
| **E. D. Peters** (gift), . . . . . | | 250.00 | |
| Philadelphia, . . . . . | | 562.06 | |
| Amounts carried forward, . . . . | | $45,872.59 | $557,713.24 |

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TABLE No. II, THE COLLEGE, CONTINUED

RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . | | $45,872.59 | $557,713.24 |
| Income of Scholarship Funds and Gifts for Scholarships (*continued*). | | | |
| **Wendell Phillips** Memorial, . . . . . | | 83.98 | |
| **William Reed,** . . . . . | | 158.94 | |
| **Ricardo** Prize (gift), . . . . . | | 350.00 | |
| **Rodger,** . . . . . | | 67.77 | |
| **Henry Bromfield Rogers,** . . . . . | | 181.45 | |
| **Edward Russell,** . . . . . | | 299.26 | |
| **Sales,** . . . . . | | 294.57 | |
| **Saltonstall,** . . . . . | | 585.24 | |
| **Leverett Saltonstall,** . . . . . | | 446.37 | |
| **Mary Saltonstall,** . . . . . | | 360.72 | |
| **James Savage** (part, see pp. 124, 143). | | | |
| **Savage** Scholarship, . . . . . | | 300.00 | |
| **Sever,** . . . . . | | 165.39 | |
| **Sewall,** . . . . . | | 579.08 | |
| **Shattuck,** . . . . . | | 2,587.88 | |
| **Slade,** . . . . . | | 313.81 | |
| **Dunlap Smith,** . . . . . | | 200.25 | |
| **Story,** . . . . . | | 234.88 | |
| **Stoughton.** | | | |
| Use of pasture, . . . . . | $80.41 | | |
| Interest, . . . . . | 101.96 | 182.37 | |
| **Swift,** . . . . . | | 205.79 | |
| **Thayer,** . . . . . | | 4,105.40 | |
| **Gorham Thomas,** . . . . . | | 223.92 | |
| **Toppan,** . . . . . | | 400.92 | |
| **Townsend,** . . . . . | | 1,332.29 | |
| **Walcott,** . . . . . | | 261.74 | |
| **Christopher M. Weld,** . . . . . | | 554.49 | |
| **Jacob Wendell,** . . . . . | | 281.28 | |
| **Whiting,** . . . . . | | 611.30 | |
| **Josiah Dwight Whitney,** . . . . . | | 257.30 | |
| **Mary L. Whitney,** . . . . . | | 539.22 | |
| **Willard** Scholarship, . . . . . | | 508.08 | |
| **Charles Wyman,** . . . . . | | 520.35 | 63,016.63 |
| Income of Beneficiary and Loan Funds, and Repayments. | | | |
| **Rebecca C. Ames.** | | | |
| Interest, . . . . . | $2,680.03 | | |
| Loan repaid, . . . . . | 50.00 | $2,730.03 | |
| **Nathaniel Appleton,** . . . . . | | 33.53 | |
| **Edward Austin** (see pp. 102, 103, 132). | | | |
| For Loans, . . . . . | | 2,865.54 | |
| Amounts carried forward, . . . . . | | $5,629.10 | $620,729.87 |

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## Table No. II, The College, continued

### RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . | | $5,629.10 | $620,729.87 |
| Income of Beneficiary and Loan Funds, and Repayments (*continued*). | | | |
| **Edward Austin** Loans Repaid (L. S. S.), . . | | 172.71 | |
| **Frank Bolles** Memorial. | | | |
| Interest, . . . . . | $104.33 | | |
| Repayment, . . . . . | 15.00 | 119.33 | |
| **William Brattle,** . . . . . | | 83.63 | |
| **Daniel A. Buckley,** . . . . . | | 8,134.24 | |
| **Walter Channing Cabot,** . . . . . | | 2,564.29 | |
| **Edward Erwin Coolidge** (part, see p. 90), | | 380.00 | |
| **Thomas Danforth,** . . . . . | | 57.12 | |
| **Moses Day,** . . . . . | | 275.48 | |
| **Calvin** and **Lucy Ellis** Aid (part, see p. 100), | | 1,792.59 | |
| **John Ellery,** . . . . . | | 23.94 | |
| Exhibitions, . . . . . | | 67.42 | |
| **Thomas Fitch,** . . . . . | | 43.48 | |
| **Ephraim Flynt,** . . . . . | | 25.81 | |
| **Henry Flynt,** . . . . . | | 8.99 | |
| **Henry Gibbs,** . . . . . | | 26.82 | |
| **John Glover,** . . . . . | | 177.66 | |
| **Price Greenleaf** (part, see pp. 104, 123, 124). | | | |
| **Price Greenleaf** Aid. Interest, | $17,648.08 | | |
| Repayment, . . . . . | 186.83 | 17,834.91 | |
| **Edwin A. W. Harlow,** . . . . . | | 564.49 | |
| **Edward Holyoke,** . . . . . | | 20.00 | |
| **Robert Keayne,** . . . . . | | 129.33 | |
| **Bertram Kimball,** . . . . . | | 1,264.01 | |
| **Lawrence** Scientific School Loan, repayments. | | | |
| To income, . . . . . | $400.00 | | |
| To capital, . . . . . | 1,111.86 | 1,511.88 | |
| **Mary Lindall,** . . . . . | | 56.00 | |
| **Susan B. Lyman,** . . . . . | | 302.44 | |
| **Anne Mills,** . . . . . | | 12.57 | |
| **Munroe,** . . . . . | | 551.46 | |
| **Palfrey** Exhibition, . . . . . | | 105.95 | |
| **Dr. Andrew P. Peabody** Memorial. | | | |
| Interest, . . . . . | $257.30 | | |
| Repayment, . . . . . | 55.00 | 312.30 | |
| Scholarship and Beneficiary Money Returned. | | | |
| Loans repaid, . . . . . | $7,200.35 | | |
| Interest, . . . . . | 135.95 | 7,336.30 | |
| **Joseph Sewall,** . . . . . | | 11.97 | |
| **Alexander W. Thayer** (part, see p. 157), . | | 302.70 | |
| **Quincy Tufts,** . . . . . | | 563.98 | |
| Amounts carried forward, . . . . . | | $50,462.90 | $620,729.87 |

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## Table No. II, The College, continued

### RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, | $50,492.90 | $620,729.87 |
| **Income of Beneficiary and Loan Funds, and Repayments** (*continued*). | | |
| **Benjamin Wadsworth,** | 16.16 | |
| **Stuart Wadsworth Wheeler.** | | |
| Interest, $321.79 | | |
| Loans repaid, 59.00 | 380.79 | |
| Student Fund of the **Harvard** Engineering Society of New York (gift), | 600.00 | 51,459.85 |
| **Income of Prize Funds, and gifts for prizes.** | | |
| **Jeremy Belknap** (gift), | $50.00 | |
| **James Gordon Bennett,** | 88.73 | |
| **Philo Sherman Bennett,** | 20.30 | |
| **Francis Boott** (part, see p. 107), | 190.00 | |
| **Bowdoin** Prizes for Dissertations, | 1,610.04 | |
| **Boylston** Prizes for Elocution, | 158.42 | |
| **Coolidge** Debating, | 276.08 | |
| **Dante** Prize (gift), | 150.00 | |
| **Lloyd McKim Garrison,** | 137.11 | |
| **Harvard** Menorah Society (gift), | 100.00 | |
| **Edward Hopkins** Gift for "Deturs." | | |
| From Trustees, $221.86 | | |
| Interest on balance, 99.84 | 321.70 | |
| **Sales,** | 57.92 | |
| **John O. Sargent,** | 133.77 | |
| **George B. Sohier** (part, see p. 123), | 250.00 | |
| **Charles Sumner,** | 200.89 | |
| **Robert N. Toppan,** | 201.39 | |
| **Philip Washburn,** | 114.43 | 4,060.78 |
| **Income of Sundry Funds for Special Purposes.** | | |
| Botanic Department (part, see p. 141). | | |
| One-fourth for Cryptogamic Herbarium, | $502.22 | |
| One-eighth for Laboratories of Botany, | 251.11 | |
| **William H. Baldwin, Jr. 1885,** | 292.29 | |
| **Francis Boott** (part, see p. 107), | 367.47 | |
| **Francis James Child** Memorial, | 587.72 | |
| Classical Publication Fund of the **Class of 1856.** | | |
| Interest, $358.80 | | |
| Sales, 518.70 | 877.50 | |
| Book Fund of the **Class of 1881,** | 180.89 | |
| Cryptogamic Herbarium, interest on balance, | 95.55 | |
| **Class of 1883** Special, | 1.06 | |
| **George A. Gardner,** | 293.76 | |
| **George Silsbee** and **Ellen Sever Hale,** | 283.30 | |
| Amounts carried forward, | $3,732.87 | $676,250.50 |

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## Table No. II, The College, continued

### RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $3,732.87 | $676,250.50 |
| Income of Sundry Funds for Special Purposes (*continued*). | | | |
| **Harvard** Oriental Series, . . . . . | | 768.56 | |
| Music Department, . . . . . | | 57.57 | |
| **Francis Greenwood Peabody** (part, see p. 101), | | 2,639.63 | |
| **Nelson Robinson Jr.** (part, see pp. 101, 102). | | | |
| Interest, . . . . . | $5,054.39 | | |
| Sales, . . . . . | 115.35 | 5,169.74 | |
| **Nelson Robinson Jr.** Additional (part, see p. 101), . . . . . | | 225.23 | |
| **Robert W. Sayles,** . . . . . | | 270.88 | |
| **George William Sawin,** . . . . . | | 242.65 | |
| **Shaler** Memorial, . . . . . | | 1,643.57 | |
| **John E. Thayer,** . . . . . | | 824.01 | |
| **Elizabeth Torrey,** . . . . . | | 54.79 | |
| **Henry Warren Torrey.** | | | |
| Interest, . . . . . | $571.36 | | |
| Sales, . . . . . | 378.11 | 949.47 | |
| Unknown Memorial (part, see p. 101), . . . . . | | 1,800.00 | |
| **Samuel Ward,** . . . . . | | 900.77 | |
| **Cyrus M. Warren,** . . . . . | | 329.61 | |
| **Henry C. Warren** (part, see p. 102), . . . . | | 2,008.18 | |
| **David A. Wells** (part, see p. 102), . . . . . | | 1,284.78 | |
| **Chauncey Wright,** . . . . . | | 59.69 | 22,962.00 |
| Sundry Gifts. | | | |
| For the Department of Architecture. | | | |
| Gift, . . . . . | $2,800.00 | | |
| Interest, . . . . . | 22.76 | $2,822.76 | |
| For the Department of the Classics. | | | |
| Sales of publications, . . . . . | | 182.49 | |
| Gift for the Museum of Classical Archaeology, | | 100.00 | |
| For the Department of Forestry. | | | |
| Gift, . . . . . | $60,000.00 | | |
| Interest, . . . . . | 126.34 | 60.126.34 | |
| For the Department of Music, . . . . . | | 150.00 | |
| For the Department of Sanskrit. | | | |
| Interest, . . . . . | $22.30 | | |
| Sales of publications, . . . . . | 344.88 | 367.18 | |
| For the Philosophical Library . . . . . | | 110.00 | |
| For the Psychological Laboratory, books, . . . . | | 50.00 | |
| For the Semitic Library. Interest, . . . . . | | 16.58 | |
| For the Bermuda Biological Station. | | | |
| Gifts, . . . . . | $500.00 | | |
| Interest, . . . . . | 16.08 | 516.08 | |
| Amounts carried forward, . . . . . | | $64,441.43 | $699,212.50 |

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## TABLE NO. II, THE COLLEGE, CONTINUED

### RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . . | | $64,441.43 | $699,212.50 |
| **Sundry Gifts (*continued*).** | | | |
| For the Graduate School of Business Administration. | | | |
| Gifts, . . . . . | $1,700.00 | | |
| Interest, . . . . . | 6.87 | 1,706.87 | |
| For the School for Social Workers . . . . . | | 750.00 | |
| For the Ethics of the Social Questions, . . . . . | | 500.00 | |
| For Summer School Mining Camp. | | | |
| Gifts, . . . . . | $3,000.00 | | |
| Interest, . . . . . | 5.14 | 3,005.14 | |
| For rooms for the visiting German Professor, . . | | 1,000.00 | |
| For furnishings for the Department of Social Ethics in Emerson Hall. Interest, . . . . . | | 16.29 | |
| For decorating the front of the Nelson Robinson Jr. Hall. | | | |
| Gift, . . . . . | $15,000.00 | | |
| Interest, . . . . . | 190.05 | 15,190.05 | |
| For the Shaler Memorial Tablet, . . . . . | | 215.00 | |
| For the Collection of American Woods, . . . . . | | 100.00 | |
| For Plantations in the College Yard. Interest, . | | 70.28 | |
| For meeting the deficit in the account with the dining-room for the Summer Schools in 1907, . | | 3,884.62 | 90,879.68 |

**Receipts from students.**

| | Regular Programme | Additional Courses | | |
|---|---|---|---|---|
| Tuition fees. | | | | |
| College. | | | | |
| Regular, . . . . . | $301,945.00 | $31,217.38 | | |
| Special, . . . . . | 31,480.00 | 1,880.01 | | |
| Lawrence Scientific School, . . . . . | 14,348.33 | 270.00 | | |
| | $347,723.33 | $33,367.39 | | |
| Graduate School of Arts and Sciences, . | 49,269.00 | 200.00 | | |
| Applied Science, . . | 9,325.00 | | | |
| School for Social Workers, . . . . | 68.33 | | | |
| Radcliffe students in University courses, | 2,265.00 | | | |
| For afternoon and Saturday courses for teachers, . . | 1,635.00 | | | |
| Summer Schools in Cambridge, . . . | 24,444.50 | | | |
| | $434,725.16 | $33,567.39 | $468,292.55 | |
| Amounts carried forward, . . . . . | | | $468,292.55 | $790,092.18 |

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## Table No. II, The College, continued

### RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . . | | $468,292.55 | $790,092.18 |
| **Receipts from Students (*continued*).** | | | |
| Registration Fees. | | | |
| For late registration, . . . . . | $480.00 | | |
| Summer Schools in Cambridge, . | 1,824.00 | 2,304.00 | |
| Auditors Fees. | | | |
| Summer Schools in Cambridge, . . . . . | | 1,497.00 | |
| Examination fees. | | | |
| Admission, . . . . . | $9,373.00 | | |
| Condition, make-up and advanced standing, . . . . . | 3,267.00 | | |
| Doctor of Philosophy, . . . . . | 60.00 | 12,700.00 | |
| Graduation fees, . . . . . | | 7,420.00 | |
| Laboratory fees. | | | |
| Astronomy, . . . . . | $305.00 | | |
| Botany, . . . . . | 1,065.00 | | |
| Chemistry, . . . . . | 14,699.74 | | |
| Engineering, . . . . . | 3,424.00 | | |
| Engineering, Squam Lake, . . . | 1,525.00 | | |
| Geology, . . . . . | 1,647.50 | | |
| Hygiene, . . . . . | 1,280.00 | | |
| Mineralogy, . . . . . | 497.50 | | |
| Mining and Metallurgy, . . . . . | 3,471.48 | | |
| Philosophy, . . . . . | 180.00 | | |
| Physics, . . . . . | 4,640.00 | | |
| Zoölogy, . . . . . | 1,267.50 | 33,953.72 | |
| College Dormitories: Hollis, Stoughton, Holworthy, Thayer, Weld, Wadsworth House, Walter Hastings, Perkins, and Conant, . . . . . | $70,613.68 | | |
| Dormitories belonging to University Houses and Lands: Grays, Holyoke House, College House, Gannett House, and Foxcroft House, . . . | 17,613.68 | | |
| Matthews Hall, . . . . . | 13,641.66 | | |
| | $102,031.17 | | |
| Less the following items: — | | | |
| Receipts from dormitories belonging to University Houses and Lands account, credited under income of the Funds which constitute the principal of this account, | $17,613.68 | | |
| One-half net income from Matthews Hall, credited under income of Matthews Scholarships, . . | 4,868.72 | 22,482.40 | 79,548.77 |
| Amounts carried forward, . . . . . | | $605,715.04 | $790,092.18 |

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## Table No. II, The College, continued

### RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $605,715.04 | $790,092.18 |
| **Receipts from Students (*continued*).** | | |
| Fines for late payment of dues (see Catalogue 1907–08, p. 451), . . . . . | 310.00 | |
| Summer School excursions, surplus, . . . . . | 91.20 | 606,116.24 |
| **Sundries.** | | |
| Final repayment on account of a special appropriation for specimens for the Department of Mineralogy and Petrography, . . . . . | $115.00 | |
| Sale of tickets to Commencement Lunch, . . . . | 314.00 | |
| " copyright, Classical Department, . . . . | 8.98 | |
| " University Hymn Books, . . . . . | 22.35 | |
| " Annals of Mathematics, . . . . . | 492.47 | |
| " Propositions in Geometry, . . . . . | 111.90 | |
| " German Composition, . . . . . | 50.43 | |
| " Infinite Series, . . . . . | 76.87 | |
| " Manual of Engineering, . . . . . | 278.62 | |
| " Elementary Exercises in Physics, . . . . | 154.04 | |
| " Hand-book of American History, . . . . | 292.43 | |
| " History 1 publications, . . . . . | 540.36 | |
| " Harvard Economic Studies, . . . . . | 42.90 | |
| " Harvard Psychological Review, . . . . . | 29.31 | |
| " Historical Monographs, . . . . . | .65 | |
| " Report on Examinations in English for Admission, . . . . . | 155.16 | |
| " old examination papers, . . . . . | 461.75 | |
| " other publications, . . . . . | 401.86 | |
| " Geographical models, . . . . . | 15.23 | |
| Sundry receipts at the Engineering Camp at Squam Lake, . . . . . | 9,388.27 | |
| Board from students at the Mining Camp, . . . . | 825.00 | |
| Interest on bank deposit, Squam Lake account, . | 35.56 | |
| " account of tuition fees paid in advance, | 2,117.64 | |
| " proceeds of sales (History 1), . . . . | 7.91 | |
| Repayment for instruments lost by students in Department of Forestry, . . . . . | 21.00 | |
| Discount on purchases by the Publication Office from the Harvard Coöperative Society, . . . . | 52.24 | |
| Insurance awards, . . . . . | 29.50 | 15,941.43 |
| | | $1,412,149.85 |

### PAYMENTS

| | | |
|---|---|---|
| **From Fellowship Funds and Gifts.** | | |
| **Julia Amory Appleton,** . . . . . | $500.00 | |
| **Edward Austin** (part, see pp. 112, 115, 134). | | |
| **Edward Austin** Fellowships, . . . . . | 2,000.00 | |
| **Austin** Teaching " . . . . . | 13,615.00 | |
| Amount carried forward, . . . . | $16,115.00 | |

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## Table No. II, The College, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, . . . . | $16,115.00 | |
| From Fellowship Funds and Gifts (*continued*). | | |
| Cercle Français de l'Université **Harvard**, . . . | 600.00 | |
| **George W. Dillaway**, . . . . . | 200.00 | |
| **Ozias Goodwin** Memorial, . . . . . | 500.00 | |
| **Harris**, . . . . . | 250.00 | |
| **Edward William Hooper**, . . . . . | 1,250.00 | |
| **John Thornton Kirkland**, . . . . . | 275.00 | |
| **Henry Lee** Memorial, . . . . . | 500.00 | |
| **Charles Eliot Norton**, . . . . . | 600.00 | |
| **Robert Treat Paine**, . . . . . | 500.00 | |
| **John Parker**, . . . . . | 2,250.00 | |
| **Francis Parkman**, . . . . . | 450.00 | |
| **Nelson Robinson Jr.** (part, see p. 116). | | |
| **Nelson Robinson Jr.** Fellowship, . . . | 1,500.00 | |
| **Rogers**, . . . . . | 1,450.00 | |
| **Henry Bromfield Rogers** Memorial, . . . | 500.00 | |
| South End House, . . . . . | 300.00 | |
| South End House Fellowship in Social Education, | 225.00 | |
| **John Tyndall**, . . . . . | 500.00 | |
| **James Walker**, . . . . . | 750.00 | |
| **Whiting**, . . . . . | 900.00 | $29,615.00 |
| From Scholarship Funds and Gifts. | | |
| **Abbot**, . . . . . | $150.00 | |
| **Edward Austin** (part, see pp. 111, 115, 134). | | |
| **Austin** Scholarships in Architecture, . . . . . $450.00 | | |
| **Austin** Scholarships for Teachers, 2,950.00 | | |
| **Austin** special assignment to a Teacher, . . . . . 135.00 | 3,535.00 | |
| **Bartlett**, . . . . . | 250.00 | |
| **Bassett**, . . . . . | 234.00 | |
| **Bigelow**, . . . . . | 500.00 | |
| **Bowditch**, . . . . . | 5,060.00 | |
| **Bright** Scholarships, . . . . . | 1,125.00 | |
| **Browne**, . . . . . | 150.00 | |
| **Daniel A. Buckley**, . . . . . | 900.00 | |
| **Morey Willard Buckminster**, . . . . . | 200.00 | |
| **Burr**, . . . . . | 1,200.00 | |
| **Ruluff Sterling Choate**, . . . . . | 275.00 | |
| **Class of 1802**, . . . . . | 325.00 | |
| " **1814**, . . . . . | 125.00 | |
| " **1815 (Kirkland)**, . . . . . | 250.00 | |
| " **1817**, . . . . . | 175.00 | |
| " **1828**, . . . . . | 150.00 | |
| " **1835**, . . . . . | 175.00 | |
| Amounts carried forward, . . . | $14,779.00 | $29,615.00 |

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## Table No. II, The College, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, . . . | $14,779.00 | $29,615.00 |
| From Scholarship Funds and Gifts (*continued*). | | |
| **Class of 1841,** . . . . . | 200.00 | |
| " **1852 (Dana),** . . . . . | 200.00 | |
| " **1856,** . . . . . | 600.00 | |
| " **1867,** . . . . . | 175.00 | |
| " **1877,** . . . . . | 200.00 | |
| " **1883,** . . . . . | 225.00 | |
| **Crowninshield,** . . . . . | 420.00 | |
| **Warren H. Cudworth,** . . . . . | 600.00 | |
| **George and Martha Derby,** . . . . . | 250.00 | |
| **Julius Dexter,** . . . . . | 200.00 | |
| **Orlando W. Doe,** . . . . . | 100.00 | |
| **William Samuel Eliot,** . . . . . | 250.00 | |
| **George H. Emerson** (part, see p. 158), . . | 900.00 | |
| **Joseph Eveleth** (part, see p. 134), . . . . . | 1,000.00 | |
| Fall River, . . . . . | 80.00 | |
| **Farrar,** . . . . . | 250.00 | |
| **Richard Augustine Gambrill,** . . . . . | 450.00 | |
| **Charles Haven Goodwin,** . . . . . | 300.00 | |
| **Greene,** . . . . . | 150.00 | |
| **Price Greenleaf** (part, see pp. 115, 124). | | |
| **Price Greenleaf** Scholarships, . . . . . | 2,880.00 | |
| **Harvard** Club of Buffalo, . . . . . | 200.00 | |
| " " Chicago, . . . . . | 300.00 | |
| " " Cleveland, . . . . . | 400.00 | |
| " " St. Louis, . . . . . | 300.00 | |
| " " San Francisco, . . . . . | 400.00 | |
| **John Appleton Haven,** . . . . . | 400.00 | |
| **William Hilton** (part, see p. 135), . . . . . | 450.00 | |
| **Ebenezer Rockwood Hoar,** . . . . . | 425.00 | |
| **Levina Hoar,** for the town of Lincoln, . . . . | 250.00 | |
| **R. M. Hodges.** | | |
| **Hodges** Scholarship, . . . . . | 250.00 | |
| **Hollis,** . . . . . | 250.00 | |
| **Henry B. Humphrey,** . . . . . | 450.00 | |
| **Charles L. Jones,** . . . . . | 1,200.00 | |
| **George Emerson Lowell,** . . . . . | 400.00 | |
| **Markoe,** . . . . . | 150.00 | |
| **Matthews,** . . . . . | 4,440.00 | |
| **William Merrick,** . . . . . | 225.00 | |
| **Morey,** . . . . . | 325.00 | |
| **Lady Mowlson,** . . . . . | 225.00 | |
| Boston Newsboys', . . . . . | 150.00 | |
| **Howard Gardner Nichols,** . . . . . | 225.00 | |
| Amounts carried forward, . . . . . | $35,624.00 | $29,615.00 |

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## TABLE NO. II, THE COLLEGE, CONTINUED

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $35,624.00 | $29,615.00 |
| From Scholarship Funds and Gifts (*continued*). | | |
| **Lucy Osgood,** . . . . . | 225.00 | |
| **George Foster Peabody,** . . . . . | 250.00 | |
| **Pennoyer,** . . . . . | 127.00 | |
| **Rebecca A. Perkins,** . . . . . | 150.00 | |
| **E. D. Peters,** . . . . . | 250.00 | |
| Philadelphia, . . . . . | 425.00 | |
| **Wendell Phillips** Memorial, . . . . . | 50.00 | |
| **William Reed,** . . . . . | 90.00 | |
| **Ricardo** Prize, . . . . . | 350.00 | |
| **Henry Bromfield Rogers,** . . . . . | 150.00 | |
| **Edward Russell,** . . . . . | 225.00 | |
| **Sales,** . . . . . | 200.00 | |
| **Saltonstall,** . . . . . | 425.00 | |
| **Leverett Saltonstall,** . . . . . | 325.00 | |
| **Mary Saltonstall,** . . . . . | 300.00 | |
| **James Savage** (part). | | |
| **Savage** Scholarship, . . . . . | 300.00 | |
| **Sever,** . . . . . | 150.00 | |
| **Sewall,** . . . . . | 400.00 | |
| **Shattuck,** . . . . . | 2,100.00 | |
| **Slade,** . . . . . | 250.00 | |
| **Dunlap Smith,** . . . . . | 200.00 | |
| **Story,** . . . . . | 175.00 | |
| **Thayer,** . . . . . | 2,760.00 | |
| **Gorham Thomas,** . . . . . | 150.00 | |
| **Toppan,** . . . . . | 300.00 | |
| **Townsend,** . . . . . | 1,000.00 | |
| **Walcott,** . . . . . | 200.00 | |
| **Christopher M. Weld,** . . . . . | 400.00 | |
| **Jacob Wendell,** . . . . . | 200.00 | |
| **Whiting,** . . . . . | 480.00 | |
| **Josiah Dwight Whitney,** . . . . . | 145.00 | |
| **Mary L. Whitney,** . . . . . | 300.00 | |
| **Charles Wyman,** . . . . . | 400.00 | |
| University Scholarships. | | |
| Undergraduate. | | |
| Normal, . . . . . | 600.00 | |
| **Lawrence** Scientific School, . . . . . | 1,050.00 | |
| Graduate School of Arts and Sciences, . . . | 3,000.00 | |
| Graduate School of Applied Science. | | |
| Architectural League, . . . . . | 300.00 | |
| General, . . . . . | 750.00 | 54,776.00 |
| Amount carried forward, . . . . . | | $84,391.00 |

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## Table No. II, The College, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $84,891.00 |
| From Beneficiary and Loan Funds. | | |
| **Rebecca C. Ames,** | $2,028.00 | |
| **Edward Austin** (part, see pp. 111, 112, 134). | | |
| Loans to L. S. S. students, $233.00 | | |
| " Special " 947.69 | 1,180.69 | |
| **Frank Bolles** Memorial, | 45.00 | |
| **Walter Channing Cabot,** | 2,429.34 | |
| **Edward Erwin Coolidge,** | 380.00 | |
| **Moses Day,** | 275.48 | |
| **Warren Delano Jr.** Loan Scholarship, | 250.00 | |
| **Calvin** and **Lucy Ellis** Aid. | | |
| Beneficiaries, $1,415.00 | | |
| Expenses, 12.00 | 1,427.00 | |
| Exhibitions, | 67.42 | |
| **Price Greenleaf** (part, see pp. 113, 124). | | |
| **Price Greenleaf** Aid, | 16,151.99 | |
| **Edwin A. W. Harlow,** | 341.66 | |
| **Bertram Kimball,** | 1,197.50 | |
| **Lawrence** Scientific School Loans Repaid, | 655.00 | |
| **Munroe,** | 551.46 | |
| **Palfrey** Exhibition, | 80.00 | |
| **Dr. Andrew P. Peabody** Memorial, | 170.00 | |
| **Quincy Tufts,** | 563.98 | |
| Scholarship and Beneficiary Money Returned, | 1,323.46 | |
| Anonymous gift for beneficiary use in the Graduate School of Arts and Sciences, | 200.00 | 29,317.98 |
| From Prize Funds and Gifts for Prizes. | | |
| **Jeremy Belknap,** | $50.00 | |
| **Philo Sherman Bennett,** | 40.00 | |
| **Francis Boott.** | | |
| Prize, $100.00 | | |
| Expenses, 90.00 | 190.00 | |
| **Bowdoin** Prizes for Dissertations. | | |
| Prizes, $1,450.00 | | |
| Expenses, 37.72 | 1,487.72 | |
| **Boylston** Prizes for Elocution, | 255.00 | |
| **Coolidge** Debating, | 200.00 | |
| **Dante** Prize, | 50.00 | |
| **Lloyd McKim Garrison.** | | |
| Prizes, $100.00 | | |
| Expenses, 16.75 | 116.75 | |
| **Harvard** Menorah Society Prize, | 100.00 | |
| **Edward Hopkins** Gift for "Deturs," | 201.20 | |
| **Sales,** | 45.00 | |
| Amounts carried forward, | $2,735.67 | $113,708.98 |

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TABLE No. II, THE COLLEGE, CONTINUED

PAYMENTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . . | | $2,735.67 | $113,708.98 |
| From Prize Funds and Gifts for Prizes (*continued*). | | | |
| **John O. Sargent,** . . . . . | | 100.00 | |
| **George B. Sohier** (part, see p. 125), . . . . | | 250.00 | |
| **Robert N. Toppan,** . . . . . | | 300.00 | |
| **Philip Washburn,** . . . . . | | 75.00 | 3,460.67 |
| From Sundry Funds and Balances for Special Purposes. | | | |
| Annals of Mathematics. | | | |
| Printing, . . . . . | $917.59 | | |
| University charge (see p. 89), . . | 208.26 | $1,125.85 | |
| **Francis Boott,** books for the Department of Music, . . . . . | | 258.99 | |
| **Francis James Child** Memorial, books, . . | | 346.14 | |
| Classical Publication Fund of the **Class of 1856.** | | | |
| **Harvard** Studies in Class. Philol., $1,090.41 | | | |
| Interest on advances, . . . . . | 87.54 | | |
| | $1,177.95 | | |
| University charge, . . . . . | 258.94 | 1,431.89 | |
| Book Fund of the **Class of 1881,** books for the Department of Chemistry, . . . . . | | 70.83 | |
| **George A. Gardner,** photographs, etc., for the Department of Geology, . . . . . | | 230.65 | |
| **Harvard** Economic Studies, Vols. III, IV, . . | | 2,688.71 | |
| **Harvard** Oriental Series, publications, . . . . | | 684.83 | |
| **Francis Greenwood Peabody,** . . . . . | | 6,078.86 | |
| **Nelson Robinson Jr.** (part, see p. 112). | | | |
| Expenses of Nelson Robinson Jr. Hall, . . . | | 5,169.74 | |
| **Nelson Robinson Jr.** Additional. | | | |
| Psychological Laboratory. | | | |
| Mechanic, . . . . . | $601.65 | | |
| Sundries, . . . . . | 2.10 | 603.75 | |
| **Robert W. Sayles,** for the Department of Geology, . . . . . | | 200.76 | |
| **Shaler** Memorial, . . . . . | | 1,723.36 | |
| **John E. Thayer,** Quarterly Journal of Economics, . . . . . | | 608.72 | |
| **Elizabeth Torrey,** books for the Department of History, . . . . . | | 10.43 | |
| **Samuel Ward,** cost of board at Memorial Hall in excess of rates guaranteed by the Corporation, January 1 to April 30, 1908, . . . . . | | 2,562.53 | |
| Unknown Memorial (part), services and expenses, | | 2,044.08 | |
| **Cyrus M. Warren,** research in Chemistry, . | | 164.26 | |
| **Henry C. Warren** (part), publication, . . . | | 1,717.91 | 27,732.29 |
| Amount carried forward, . . . . . | | | $144,891.94 |

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## Table No. II, The College, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, . . . . . | | $144,891.94 |
| **From Gifts for Special Purposes.** | | |
| For the Chinese Government to apply towards the travelling expenses and support at Harvard University of Chinese students in addition to the sixteen sent by the Chinese Government in 1906–07, . . . . . | $2,400.00 | |
| For Department of Architecture, books, casts, etc., | 1,912.82 | |
| " " The Classics, books, etc. . . . | 481.96 | |
| " " Economics. | | |
| Books and material, $102.51 | | |
| Maps and charts, . 81.20 | 183.71 | |
| " " Forestry, land in Petersham, etc., | 58,221.77 | |
| " " French, books, . . . . . | 24.84 | |
| " " Geology and Geography, models, | 21.85 | |
| " " Geology, for a seismograph, . . | 685.00 | |
| " " Mining and Metallurgy, . . . | 12.70 | |
| " " Music, books, . . . . . | 143.32 | |
| " Semitic Library, books, . . . . . | 305.89 | |
| " Bermuda Biological Station, . . . . . | 564.74 | |
| " Graduate School of Business Administration, for preliminary expenses, . . . . . | 217.79 | |
| " School for Social Workers, . . . $1,424.34 | | |
| Less charged to College salaries, 1,000.00 | 424.34 | |
| " The Ethics of the Social Questions. Sundry expenses, . . . . . | 500.00 | |
| " Decorating the front of the Nelson Robinson Jr. Hall, . . . . . | 193.70 | |
| " Furnishings for the Department of Social Ethics, in Emerson Hall, . . . . . | .30 | |
| " Furnishing Emerson Hall, . . . . . | 192.34 | |
| " Philosophical Library, books, . . . . . | 228.42 | |
| " Psychological Laboratory, books, . . . . . | 50.00 | |
| " Summer School Mining Camp, . . . . . | 2,318.70 | |
| " Rooms for the visiting German Professor, . | 885.26 | 69,969.45 |
| **Payments made from College income on the following accounts: —** | | |
| Museum of Comparative Zoölogy (part, see Table XIII, page 146), . . . . . | $4,077.50 | |
| Jefferson Physical Laboratory (part, see Table XVIII, page 152), . . . . . | 766.23 | |
| Hemenway Gymnasium (part, see Table XXI, page 155), . . . . . $7,677.81 | | |
| Less included in University charge (p. 122), . . . . . 219.60 | 7,458.21 | 12,301.94 |
| Amount carried forward, . . . . . | | $227,163.33 |

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TABLE NO. II, THE COLLEGE, CONTINUED

PAYMENTS

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $227,163.33 |
| Summer Schools. | | | |
| Salaries, | | $18,413.10 | |
| Secretary, | | 900.00 | |
| Repairs and improvements, | | 24.34 | |
| Care and cleaning, | | 193.55 | |
| Fuel, | | 6.75 | |
| Water, | | 15.76 | |
| Lighting, | | 15.09 | |
| Printing, | | 441.50 | |
| Stationery and postage, | | 798.46 | |
| Prospectus and Catalogue, | | 857.90 | |
| Advertising, | | 22.00 | |
| Services and wages, | | 883.39 | |
| Remission of fees for instruction, | | 230.00 | |
| Laboratory fees paid to the Dep't of Geology, | | 47.50 | |
| Receptions, | | 310.35 | |
| Telephone, | | 26.76 | |
| Use of swimming tank, | | 400.00 | |
| Gymnasium expenses, | | 96.82 | |
| Instruments and appliances, | | 24.40 | |
| Deficit for dining-room, June 24 to August 9, 1907, paid from special gift, | | 3,884.62 | |
| Office in Massachusetts Hall, | | 42.13 | |
| Supplies, materials, and sundries, | | 265.75 | |
| | | $27,900.17 | |
| University charge (see p. 89). | | | |
| Bursar's Office, collections and payments, | $348.43 | | |
| Publication Office, salary and expenses, | 307.66 | 656.09 | 28,556.26 |
| Appropriations for collections, laboratories, etc. | | | |
| Anthropology, | | $100.00 | |
| Architecture, | | 1,215.35 | |
| Landscape Architecture, | $1,350.00 | | |
| Assistance, | 800.00 | 2,150.00 | |
| Botany, | $200.00 | | |
| Assistance, | 480.00 | 680.00 | |
| Chemistry, | $250.00 | | |
| Assistance, | 50.00 | 300.00 | |
| Classics, | | 200.00 | |
| Economics, | $400.00 | | |
| Office expenses, | 385.00 | 785.00 | |
| Education, | | 100.00 | |
| Amounts carried forward, | | $5,530.35 | $255,719.59 |

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## Table No. II, The College, continued

### PAYMENTS

| | | | |
|---|---|---|---|
| Amounts brought forward, . . . . | | $5,530.35 | $255,719.59 |
| Appropriations for collections, laboratories, etc. (*continued*). | | | |
| Engineering, . . . . . | | 7,150.00 | |
| English, . . . . . | | 200.00 | |
| Fine Arts, . . . . . | | 200.00 | |
| Forestry, . . . . . | | 350.00 | |
| French and Spanish, . . . . . | | 1,300.00 | |
| French History, for books, . . . . . | | 1,000.00 | |
| Geology and Geography, . . . . . | $230.00 | | |
| Assistance, . . . . . | 266.67 | 496.67 | |
| German, . . . . . | | 760.00 | |
| Graduate Schools, advertising, . . . . . | | 100.00 | |
| History and Government, . . . . . | | 850.00 | |
| History, for books, . . . . . | | 138.66 | |
| Mathematics, . . . . . | | 716.14 | |
| Mineralogy and Petrography, . . . . . | | 350.00 | |
| Mining and Metallurgy, . . . . . | | 450.00 | |
| Music, . . . . . | | 250.00 | |
| Physics, . . . . . | | 1,000.00 | |
| Psychology, . . . . . | | 275.00 | |
| Social Ethics, . . . . . | | 500.00 | |
| Zoölogy, . . . . . | | 200.00 | |
| " for reprints, . . . . . | | 50.00 | |
| Laboratory fees appropriated, . . . . . | | 28,117.05 | 49,983.87 |
| Salaries. | | | |
| Instruction (except Austin Teaching Fellowships, see p. 111), . . . . . | | $531,481.10 | |
| Administration. | | | |
| Deans, . . . . . | $6,416.65 | | |
| Chairmen of Committees, . . . . . | 400.00 | | |
| Recorders and Secretaries, . . . . . | 7,650.00 | | |
| Examination Proctors, . . . . . | 1,425.00 | | |
| School for Social Workers, . . . . | 1,000.00 | 16,891.65 | 548,372.75 |
| For College Public Buildings, which are not valued in the Treasurer's books. | | | |
| Repairs, improvements, &c., . . . . . | | $5,864.96 | |
| Care and cleaning, . . . . . | | 13,791.34 | |
| Fuel, . . . . . | | 7,181.07 | |
| Water, . . . . . | | 539.58 | |
| Lighting, . . . . . | | 1,801.28 | |
| Insurance, . . . . . | | 990.42 | |
| Electric power, . . . . . | | 570.47 | |
| Supplies and sundries, . . . . . | | 462.49 | |
| Telephones, . . . . . | | 25.98 | |
| Furniture, . . . . . | | 413.45 | 31,641.04 |
| Amount carried forward, . . . . . | | | $885,717.25 |

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## Table No. II, The College, continued

### PAYMENTS

| | | | |
|---|---|---|---|
| Amount brought forward, | | | $885,717.25 |
| For College Dormitories, Hollis, Stoughton, Holworthy, Thayer, Weld, Wadsworth House, Walter Hastings, Perkins, and Conant, which are not valued in the Treasurer's books; and for Matthews Hall. | | | |
| Repairs and improvements, | | $8,134.04 | |
| Care and cleaning, | | 16,938.63 | |
| Fuel, | | 6,642.32 | |
| Water, | | 1,288.94 | |
| Lighting, | | 3,683.20 | |
| Furniture, | | 18.68 | |
| Insurance, | | 411.82 | |
| Supplies and sundries, | | 319.08 | 37,436.71 |
| General Expenses. | | | |
| Dean's Office. | | | |
| Clerical services, | $15,272.74 | | |
| Stationery and postage, | 2,544.47 | | |
| Furniture, | 209.14 | | |
| Telephone, | 558.38 | | |
| Other expenses, | 172.33 | 18,757.07 | |
| Reading examination books, | | 3,527.71 | |
| Services of proctors, | | 1,332.70 | |
| " undergraduates, | | 1,176.90 | |
| " Head Guide in College grounds, | | 375.00 | |
| Attendants in department laboratories, | | 3,006.18 | |
| Admission examinations, | | 2,540.70 | |
| Commencement Lunch, | | 328.10 | |
| Music, Class-Day, | | 125.00 | |
| Printing Office. | | | |
| Services and wages, | $14,021.07 | | |
| Repairs and improvements, | 55.48 | | |
| Care and cleaning, | 87.09 | | |
| Supplies, | 11,587.12 | | |
| Binding, | 4,277.77 | | |
| Printing, | 1,170.76 | | |
| Electric power, | 193.81 | | |
| Freight, | 179.45 | | |
| | 31,572.55 | | |
| Less receipts from other Dep'ts, | 23,716.51 | 7,856.04 | |
| Syllabus in Geometry, | | 36.15 | |
| " Analytic Geometry, | | 41.01 | |
| " Anthropology 1, | | 77.20 | |
| " Fine Arts 3, | | 30.20 | |
| Amounts carried forward, | | $39,209.96 | $923,153.96 |

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## Table No. II, The College, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $39,209.96 | $923,153.96 |
| General Expenses (*continued*). | | |
| Draughting for Department of Engineering, . . . | 200.00 | |
| Notes in Engineering, . . . . . | 542.49 | |
| Manual in Engineering 5*b*, . . . . . | 33.78 | |
| German Composition, . . . . . | 59.65 | |
| Latin Poets, . . . . . | 188.86 | |
| Map of Europe, . . . . . | 130.45 | |
| Advertising, . . . . . | 310.49 | |
| Watchmen, . . . . . | 1,784.00 | |
| Legal expenses, . . . . . | 50.00 | |
| Receptions, . . . . . | 84.32 | |
| Department of Forestry, wages and other expenses, | 333.51 | |
| Services and expenses at Faculty meetings, . . . | 53.81 | |
| " for Regent, . . . . . | 7.00 | |
| " for Classical Department, . . . . . | 1.50 | |
| Blank books for examinations, . . . . . | 825.62 | |
| Expenses of Engineering Camp at Squam Lake, . | 11,248.83 | |
| Engineering courses in Pierce Hall, . . . . . | 10,453.14 | |
| Travelling expenses in Economics 18, . . . . . | 109.50 | |
| " " of Committee on the degree of Doctor of Philosophy, . . . . . | 38.00 | |
| Expenses of delegates, . . . . . | 23.32 | |
| College Entrance Examination Board, . . . . . | 127.30 | |
| Expense of collecting term-bills, . . . . . | 110.13 | |
| Diplomas, . . . . . | 596.07 | |
| Committee on the Publication of Academic Distinctions, . . . . . | 31.90 | |
| Lighting College Yard, . . . . . | 184.15 | |
| Stereopticon operator, . . . . . | 1.50 | |
| Lantern slides, . . . . . | 39.73 | |
| Freight and sundries, . . . . . | 116.04 | |
| Handbook of American History, . . . . . | 1,415.19 | |
| Legal services in connection with titles of land in Petersham and Phillipston for the Harvard Forest, . . . . . | 2,000.00 | 70,310.24 |
| Amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted. | | |
| College, . . . . . | $4,444.59 | |
| Lawrence Scientific School, . . . . . | 1,478.50 | |
| Graduate School of Arts and Sciences, . . . . . | 127.75 | 6,050.84 |
| University charge (see p. 89). | | |
| President's Office, salaries and expenses, . . . . | $8,189.14 | |
| Treasurer's Office, care of investments, . . . . . | 8,512.86 | |
| Bursar's Office, collections and payments, . . . | 5,222.91 | |
| " " expenses for letting College rooms, | 800.00 | |
| Amounts carried forward, . . . . . | $22,724.91 | $999,515.04 |

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## Table No. II, The College, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $22,724.91 | $999,515.04 |
| University charge (*continued*). | | |
| Secretary for Appointments, salary, . . . . . | 1,500.00 | |
| Medical Adviser, salary and expenses, . . . . . | 3,179.29 | |
| Inspector of Grounds and Buildings, salary and expenses, . . . . . | 1,869.65 | |
| Publication Office, salary and expenses, . . . . . | 1,222.03 | |
| Retiring Allowances, . . . . . | 783.05 | |
| 40% Quinquennial Catalogue, . . . . . | 215.56 | |
| 62% Annual Catalogue, . . . . . | 2,489.18 | |
| Labor, . . . . . | 4,721.71 | |
| Plank walks, . . . . . | 120.86 | |
| Driveways and gravel walks, . . . . . | 284.13 | |
| Fences (painting, etc.) . . . . . | 894.80 | |
| Watchmen, . . . . . | 933.72 | |
| Towards expenses of Bursar's office, etc., on account of the | | |
| Harvard Dining Association, . . . . . | 1,771.14 | |
| Randall Hall Association, . . . . . | 903.24 | |
| 90% Memorial Hall and Sanders Theatre, expenses for the building, . . . . . | 809.45 | |
| 80% Appleton Chapel, expenses, . . . . . | 5,370.71 | |
| Phillips Brooks House, expenses, . . . . . | 1,151.72 | |
| 10% Peabody Museum, " . . . . . | 184.05 | |
| 90% Fogg Museum, " . . . . . | 2,435.84 | |
| Hemenway Gymnasium (part, see p. 117), . . . | 219.60 | |
| Bursar's Office, collections and payments on Sundry Accounts, . . . . . | 3,178.03 | |
| University Houses and Lands, . . . . . | 127.16 | |
| Regent's salary and expenses, . . . . . | 791.51 | |
| Chemical Engine and horses presented to the City of Cambridge, . . . . . | 2,321.00 | 60,202.34 |
| | | $1,059,717.38 |

## Table No. III

## THE LIBRARY

### RECEIPTS

| | | |
|---|---|---|
| Gift for Capital Account. | | |
| **Francis Parkman** Memorial, . . . . . | | $5,925.96 |
| Income of Book Funds, and Gifts and Receipts for the purchase of books. | | |
| **Nathaniel I. Bowditch,** . . . . . | $110.14 | |
| **Bright** Legacy (½ income, see p. 103), . . . . . | 1,262.50 | |
| **William R. Castle,** . . . . . | 60.00 | |
| Amounts carried forward, . . . . . | $1,432.64 | $5,925.96 |

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## Table No. III, The Library, continued

### RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $1,432.64 | $5,925.96 |
| Income of Book Funds, and Gifts and Receipts for the purchase of books (*continued*). | | |
| **Edwin Conant** (⅓ income, see below), . . . . | 350.51 | |
| **Constantius** (⅓ income, see p. 124), . . . . . | 654.41 | |
| **Denny**, . . . . . | 271.69 | |
| **Eliza Farrar**, . . . . . | 273.61 | |
| **Price Greenleaf** (part, see pp. 104, 106, 124), . | 1,000.00 | |
| **Horace A. Haven**, . . . . . | 165.89 | |
| **Francis B. Hayes**, . . . . . | 508.94 | |
| **George Hayward**, . . . . . | 272.55 | |
| **Thomas Hollis**, . . . . . | 124.23 | |
| **Sidney Homer**, . . . . . | 109.13 | |
| **Jarvis**, . . . . . | 26.01 | |
| **Frederick A. Lane**, . . . . . | 269.42 | |
| **Lowell**, . . . . . | 1,898.40 | |
| **Charles Minot**, . . . . . | 3,058.99 | |
| **Charles Eliot Norton**, . . . . . | 452.23 | |
| **Lucy Osgood**, . . . . . | 364.61 | |
| **Mary Osgood**, . . . . . | 359.56 | |
| **Francis Parkman** Memorial, . . . . . | 19.51 | |
| **Francis Sales**, . . . . . | 197.51 | |
| **Stephen Salisbury**, . . . . . | 260.18 | |
| **Sever**, . . . . . | 1,005.66 | |
| **Samuel Shapleigh**, . . . . . | 201.90 | |
| **George B. Sohier** (part, see p. 107), . . . . . | 103.50 | |
| Subscription, . . . . . | 532.57 | |
| **Charles Sumner**, . . . . . | 1,894.46 | |
| **Kenneth Matheson Taylor**, . . . . . | 260.98 | |
| **Daniel Treadwell** (⅓ income, see p. 124), . . . | 306.11 | |
| **Ichabod Tucker**, . . . . . | 206.60 | |
| **James Walker**, . . . . . | 807.65 | |
| **Thomas W. Ward**, . . . . . | 267.95 | |
| **J. Huntington Wolcott**, . . . . . | 1,021.46 | |
| Gifts for books. Gifts, . . . . . $5,112.20 | | |
| Interest, . . . . . 22.75 | 5,134.95 | |
| **Gift for Paul Revere Engraving**, . . . . . | 700.00 | |
| Sale of duplicate books, . . . . . | 171.20 | |
| Received for books lost, . . . . . | 84.20 | 24,269.21 |
| Income of **R. M. Hodges Fund** (part, see p. 104). For publishing bibliographical contributions, . . . . . | | 388.00 |
| Income of Funds for general purposes. | | |
| **Daniel Austin**, . . . . . | $394.25 | |
| **Edwin Conant** (⅓ income, see p. 123), . . . . | 1,051.52 | |
| Amounts carried forward, . . . . . | $1,445.77 | $30,583.17 |

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## Table No. III, The Library, continued

### RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, | | $1,445.77 | $30,583.17 |
| Income of Funds for General Purposes (*continued*). | | | |
| **Constantius** (½ income, see p. 123), | | 654.40 | |
| Fund of the **Class of 1851**, | | 37.32 | |
| " " " " (**C. F. Dunbar's** Gift), | | 36.76 | |
| **Price Greenleaf** (part, see pp. 104, 106, 123), | | 16,648.08 | |
| **Henry T. Morgan**, | | 4,138.53 | |
| **Henry L. Pierce** (part, see p. 90), | | 2,000.00 | |
| **Henry L. Pierce** (Residuary) (part, see p. 145), | | 2,314.07 | |
| **Stephen Salisbury** Bequest, | | 258.56 | |
| **James Savage** (part, see pp. 105, 143), | | 1,365.75 | |
| **Daniel Treadwell** (½ income, see p. 123), | | 306.10 | |
| **Eben Wright**, | | 5,050,00 | 34,255.34 |
| Fees for use of Library, | | $100.00 | |
| Fines, | | 460.59 | |
| Gifts for additional service. | | | |
| Gifts, | $1,784.10 | | |
| Interest, | 7.99 | 1,792.09 | |
| Gift for special equipment, | | 110.00 | |
| Sale of Bibliographical Contributions, | | 2.25 | |
| " Index, Subject Catalogues, | | 25.75 | |
| " Memorial Biographies, | | 10.00 | 2,500.68 |
| | | | $67,339.19 |

### PAYMENTS

| | |
|---|---|
| For Books, from the following Funds, Gifts, etc. | |
| **Bowditch**, | $108.57 |
| **Bright**, | 1,246.38 |
| **Castle**, | 50.88 |
| **Edwin Conant**, | 281.54 |
| **Constantius**, | 598.31 |
| **Denny**, | 317.54 |
| **Farrar**, | 226.23 |
| **Price Greenleaf** (part, see pp. 113, 115), | 1,231.58 |
| **Haven**, | 108.78 |
| **Hayes**, | 453.15 |
| **Hayward**, | 270.98 |
| **Hollis**, | 202.83 |
| **Homer**, | 116.58 |
| **Jarvis**, | 19.19 |
| **Lane**, | 295.34 |
| **Lowell**, | 919.44 |
| **Minot**, | 3.439.48 |
| **Charles Eliot Norton**, | 151.88 |
| **Lucy Osgood**, | 378.85 |
| **Mary Osgood**, | 424.97 |
| Amount carried forward, | $10,842.50 |

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## Table No. III, The Library, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $10,842.50 |
| For Books, from the following Funds, Gifts, etc. (*contin'd*). | | |
| **Henry L. Pierce,** | 1,610.06 | |
| **Sales,** | 97.10 | |
| **Salisbury,** | 80.86 | |
| **Sever,** | 621.87 | |
| **Shapleigh,** | 228.49 | |
| **George B. Sohier** (part, see p. 116), | 94.00 | |
| Subscription, | 516.37 | |
| **Sumner,** | 1,855.48 | |
| **Kenneth Matheson Taylor,** | 188.82 | |
| **Daniel Treadwell,** | 457.24 | |
| **Tucker,** | 141.05 | |
| **Wales,** | 309.51 | |
| **Walker,** | 636.16 | |
| **Ward,** | 247.54 | |
| **J. Huntington Wolcott,** | 1,123.64 | |
| From Sundry gifts for books (balances), | 5,443.21 | |
| " gift for **Paul Revere** Engraving, | 700.00 | |
| Duplicate money and receipts for lost books, | 130.99 | |
| Fines, | 35.57 | $25,360.46 |
| Salaries, | $18,500.00 | |
| Services and wages (part, see next line), | 19,098.00 | |
| Services paid from special gifts (part, see below), | 2,170.01 | |
| Repairs, | 1,509.51 | |
| Care and cleaning, | 1,133.02 | |
| Fuel, | 977.49 | |
| Water, | 36.73 | |
| Lighting, | 1,463.48 | |
| Printing, | 737.88 | |
| Furniture, | 1,655.79 | |
| Stationery and postage, | 652.75 | |
| Telephone, | 142.03 | |
| Binding, | 2,691.12 | |
| Electric power, | 55.31 | |
| Freight, | 166.06 | |
| Insurance, | 16.55 | |
| Supplies and sundries, | 1,089.46 | |
| Moving and cleaning books, | 353.76 | |
| Improvements. | | |
| Heating tunnel, | $1,260.54 | |
| Lunch room, | 439.83 | |
| Small reading-room, | 276.65 | 1,977.02 | 54,425.97 |
| Department Libraries. | | |
| Services and wages. | | |
| Paid from special gifts, | $59.50 | |
| Remainder, | 1,156.16 | 1,215.66 |
| Amount carried forward, | | $81,002.09 |

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## Table No. III, The Library, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $81,002.09 |
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $1,122.88 | |
| Bursar's Office, collections and payments, | 336.19 | |
| Inspector of Grounds and Buildings, salary and expenses, | 108.24 | |
| Publication Office, salary and expenses, | 174.65 | |
| Annual Catalogue, | 20.08 | |
| Watchmen, | 59.02 | |
| University Houses and Lands, | 42.38 | 1,863.44 |
| | | $82,865.53 |

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## Table No. IV

## DIVINITY SCHOOL

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds for Instruction, or for general purposes. | | |
| Divinity School balance (interest on), | | $316.18 |
| Endowment, | | 3,607.07 |
| **Oliver Ames,** | | 858.50 |
| **Hannah C. Andrews,** | | 26.51 |
| **Daniel Austin,** | | 56.31 |
| **Adams Ayer,** | | 50.50 |
| **Joseph Baker,** | | 771.39 |
| Beneficiary money returned (balance), | | 10.60 |
| **Bussey** Professorship, | | 1,897.99 |
| **Bussey** Trust (part, see pp. 129, 139, 157), | | 6,528.51 |
| **Joshua Clapp,** | | 109.99 |
| **Edwin Conant,** | | 252.50 |
| **Dexter** Lectureship, | | 1,289.97 |
| **Frothingham** Professorship, | | 2,762.50 |
| **Abraham W. Fuller,** | | 53.03 |
| **Lewis Gould,** | | 46.01 |
| **John Hancock** Professorship, | $303.40 | |
| **Charles L. Hancock** (part, see p. 157), | 3,854.30 | 4,157.70 |
| **Haven,** | | 252.50 |
| **Samuel Hoar,** | | 53.02 |
| **Henry P. Kidder,** | | 505.00 |
| **Henry Lienow,** | | 463.84 |
| **Caroline Merriam,** | | 53.02 |
| **Parkman** Professorship, | | 808.81 |
| **John W. Quinby,** | | 30.86 |
| Amount carried forward, | | $24,962.31 |

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## Table No. IV, Divinity School, continued

### RECEIPTS

| | | |
|---|---|---|
| Amount brought forward, | | $24,962.31 |
| Income of Funds for Instruction, or for general purposes (*continued*). | | |
| **Abby Crocker Richmond,** | 50.50 | |
| **John L. Russell,** | 50.50 | |
| **William B. Spooner,** | 505.00 | |
| **Thomas Tileston** of New York Endowment, | 2,020.00 | |
| **Mary P. Townsend,** | 265.13 | |
| **Winthrop Ward,** | 106.05 | |
| **Winn** Professorship, | 2,870.72 | $30,830.21 |
| Interest on account of tuition fees paid in advance, | | 23.54 |
| Income of Scholarship, Beneficiary and Prize Funds. | | |
| **Robert Charles Billings,** for prizes, | $130.24 | |
| **Abner W. Buttrick,** | 678.82 | |
| **Thomas Cary,** | 291.33 | |
| **George Chapman,** | 144.73 | |
| **Joshua Clapp,** | 232.75 | |
| **Jackson** Foundation, | 770.33 | |
| **J. Henry Kendall,** | 285.98 | |
| **Nancy Kendall,** | 180.18 | |
| **William Pomroy,** | 53.02 | 2,767.38 |
| Income of Book Funds. | | |
| **Rushton Dashwood Burr,** | $229.27 | |
| **Louisa J. Hall,** | 45.45 | 274.72 |
| Receipts from Students. | | |
| Tuition fees, regular courses, | $4,915.00 | |
| " " Summer School, | 990.00 | |
| Divinity Hall, | 2,940.00 | |
| Library fines, | 4.90 | 8,849.90 |
| Gift from Society for Promoting Theological Education, | 1,510.71 | |
| Sale of tickets to Alumni Dinner, | 49.00 | |
| " catalogues, | .50 | |
| " duplicate books, | 28.30 | 1,588.51 |
| | | $44,334.26 |

### PAYMENTS

| | | |
|---|---|---|
| From Funds. | | |
| **John W. Quinby,** for supplies, | | $15.25 |
| From Scholarship Funds. | | |
| **Thomas Cary,** | $240.00 | |
| **George Chapman,** | 100.00 | |
| **Joshua Clapp,** | 180.00 | |
| **Jackson** Foundation, | 640.00 | |
| **J. Henry Kendall,** | 200.00 | |
| **Nancy Kendall,** | 140.00 | $1,500.00 |
| Amount carried forward, | | $1,515.25 |

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## Table No. IV, Divinity School, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $1,515.25 |
| From Beneficiary Funds. | | |
| **Abner W. Buttrick,** | $575.00 | |
| **William Pomroy,** | 51.56 | 626.56 |
| From **Robert Charles Billings** Fund, prize, | | 100.00 |
| From Book Funds. | | |
| **Rushton Dashwood Burr,** | $301.01 | |
| **Louisa J. Hall,** | 2.93 | 303.94 |
| Salaries for instruction, | $29,556.84 | |
| Summer School. Salaries for instruction, $1,100.00 | | |
| Printing and other expenses, 375.33 | 1,475.33 | |
| Secretary and Librarian, | 1,750.00 | |
| Services and wages, | 221.37 | |
| Library Assistants, | 1,363.71 | |
| Repairs, improvements, and labor, | 743.69 | |
| Insurance, | 104.51 | |
| Care and cleaning, | 1,927.91 | |
| Fuel, | 702.02 | |
| Water, | 77.97 | |
| Lighting, | 203.97 | |
| Printing, | 165.65 | |
| Furniture, | 76.74 | |
| Stationery and postage, | 129.90 | |
| Telephone, | 26.27 | |
| Tuning and repairing organ, | 16.40 | |
| Books, | 294.62 | |
| Cleaning books, | 42.50 | |
| Binding, | 141.95 | |
| Advertising, | 59.79 | |
| Diplomas, | 3.96 | |
| Alumni dinner, | 58.00 | |
| Entertaining Council of Federation of Churches, | 34.00 | |
| Hemenway Gymnasium (part, see p. 155), | | |
| Proportion of expenses, $83.67 | | |
| Less included in University charge below, 2.40 | 81.27 | |
| American School for Oriental Study and Research in Palestine (eighth payment), | 100.00 | |
| Subscriptions to the Fellowship in Christian Archaeology in the American School of Classical Studies in Rome, | 25.00 | |
| Supplies and sundries, | 46.97 | 39,430.34 |
| Amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, | | 146.72 |
| University charge (see p. 89). | | |
| President's Office, salary and expenses, | $89.51 | |
| Treasurer's Office, care of investments, | 618.53 | |
| Amounts carried forward, | $708.04 | $42,122.81 |

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## Table No. IV, Divinity School, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . | $708.04 | $42,122.81 |
| University charge (*continued*). | | |
| Bursar's Office, collections and payments, . . . . . | 93.40 | |
| Medical Adviser, salary and expenses, . . . . . | 84.74 | |
| Inspector of Grounds and Buildings, salary and expenses, . . . . . | 96.39 | |
| Publication Office, salary and expenses, . . . . . | 87.33 | |
| Quinquennial Catalogue, . . . . . | 10.78 | |
| Annual Catalogue, . . . . . | 100.37 | |
| Congress of Liberal Religions, . . . . . | 150.76 | |
| Labor, . . . . . | 255.82 | |
| Watchman, . . . . . | 52.55 | |
| 30% Semitic Museum expenses, . . . . . | 538.98 | |
| Phillips Brooks House (part), . . . . . | 12.48 | |
| Hemenway Gymnasium (part, see p. 128), . . . . | 2.40 | |
| Regent, . . . . . | 8.65 | |
| Towards expenses of Bursar's Office, etc., on account of | | |
| Harvard Dining Association, . . . . . | 19.35 | |
| Randall Hall Association, . . . . . | 9.88 | 2,181.92 |
| | | $44,304.73 |

## Table No. V

## LAW SCHOOL

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds and Gifts. | | |
| Law School balance (interest on), . . . . . | $2,459.80 | |
| **James Barr Ames** Loan, . . . . . | 28.99 | |
| **James Barr Ames** Prize, . . . . . | 251.46 | |
| Gift of **James Munson Barnard** and **Augusta Barnard.** Interest on balance, . . . . . | 40.95 | |
| **Bemis** Professorship, . . . . . | 4,143.12 | |
| **Bussey** Professorship, . . . . . | 1,211.00 | |
| **Bussey** Trust (part, see pp. 126, 139, 157), . . . | 6,528.51 | |
| **James C. Carter** Professorship, . . . . . | 5,444.46 | |
| **James Coolidge Carter** Loan, . . . . . | 638.27 | |
| **Dane** Professorship, . . . . . | 795.38 | |
| **Samuel Phillips Prescott Fay** 1798 Fund and Scholarship, . . . . . | 256.64 | |
| **George Fisher** Scholarship, . . . . . | 188.87 | |
| **Hughes** Loan. Interest, . . . . . $24.09 | | |
| Repayments, . . . . . 352.20 | 376.29 | |
| Law School Book, . . . . . | 2,374.56 | |
| Law School Library, . . . . . | 5,050.00 | |
| Amount carried forward, . . . . . | $29,788.30 | |

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## TABLE NO. V, LAW SCHOOL, CONTINUED

### RECEIPTS

| | | | |
|---|---|---|---|
| Amount brought forward, | | $29,788.30 | |
| Income of Funds and Gifts (*continued*). | | | |
| **Royall** Professorship, | | 421.22 | |
| **Weld** " | | 4,797.25 | |
| Scholarship Money Returned. | | | |
| Gifts, | $750.00 | | |
| Interest, | 52.82 | | |
| Repayments, | 41.00 | 843.82 | $35,850.59 |
| Interest on account of tuition fees paid in advance, | | | 506.04 |
| Tuition fees, | | | 105,660.00 |
| Sale of catalogues, | | | 5.25 |
| Unredeemed locker deposits, | | | 119.00 |
| | | | $142,140.88 |

### PAYMENTS

(See also CONSTRUCTION ACCOUNTS, Table XXIV, p. 159.)

| | | | |
|---|---|---|---|
| From Funds and Gifts. | | | |
| **Hughes** Loan, | | $409.00 | |
| **George Fisher** Scholarship, | | 150.00 | |
| Scholarship Money Returned, | | 1,140.00 | $1,699.00 |
| Scholarships from unrestricted income, | | $4,650.00 | |
| Salaries for instruction, | | 56,305.00 | |
| Librarians and Assistants, | | 11,689.91 | |
| Secretary, | | 650.00 | |
| Services of examiners and proctors, | | 614.58 | |
| Repairs and improvements, | | 721.20 | |
| Care and cleaning, | | 2,932.98 | |
| Fuel, | | 2,152.49 | |
| Water, | | 150.22 | |
| Lighting, | | 1,491.84 | |
| Printing, | | 2,303.37 | |
| Furniture, | | 997.57 | |
| Stationery and postage, | | 872.26 | |
| Telephone, | | 131.29 | |
| Books, | | 18,183.80 | |
| Binding, | | 3,224.45 | |
| Cleaning and moving books, | | 559.00 | |
| Advertising, | | 135.00 | |
| Insurance, | | 443.67 | |
| Freight, | | 258.84 | |
| Hemenway Gymnasium (part, see p. 155), | | | |
| Proportion of expenses, | $1,932.45 | | |
| Less included in University charge below, | 55.45 | 1,877.00 | |
| Travelling expenses, | | 18.45 | |
| Electric power, | | 415.42 | |
| Amounts carried forward, | | $110,278.34 | $1,699.00 |

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## Table No. V, Law School, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, . . . . . | $110,278.84 | $1,699.00 |
| Diplomas, . . . . . | 142.93 | |
| Association of American Law Schools, . . . . . | 10.00 | |
| American Bar Association, . . . . . | 5.00 | |
| Hamilton portrait, . . . . . | 25.00 | |
| Sundries, . . . . . | 303.20 | 110,764.47 |
| Amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, . . . . . | | 546.29 |
| University charge (see p. 89). | | |
| President's Office, salaries and expenses, . . . . . | $2,067.49 | |
| Treasurer's Office, care of investments, . . . . . | 809.46 | |
| Bursar's Office, collections and payments, . . . . | 833.74 | |
| Medical Adviser, salary and expenses, . . . . . | 802.67 | |
| Inspector of Grounds and Buildings, salary and expenses, . . . . . | 269.70 | |
| Publication Office, salary and expenses, . . . . . | 545.07 | |
| Quinquennial Catalogue, . . . . . | 37.72 | |
| Annual Catalogue, . . . . . | 240.89 | |
| Labor, . . . . . | 190.04 | |
| Watchmen, . . . . . | 147.00 | |
| Phillips Brooks House, . . . . . | 290.80 | |
| Hemenway Gymnasium (part, see p. 130), . . . . | 55.45 | |
| Regent, . . . . . | 199.84 | |
| Towards Bursar's Office expenses, etc., on account of | | |
| Harvard Dining Association, . . . . . | 447.16 | |
| Randall Hall Association, . . . . . | 228.04 | 7,165.07 |
| | | $120,174.83 |

## Table No. VI

## MEDICAL SCHOOL

### RECEIPTS

(See also Construction Accounts, Table XXIV, page 158.)

| | | |
|---|---|---|
| Gifts for Capital. | | |
| **Edward M. Barringer** Fund (additional), . . | $4,758.86 | |
| **Charles Follen Folsom** Memorial Fund, . . | 11,818.64 | |
| **Harvard** Medical Alumni Fund (additional), . . | 1,500.00 | |
| **John Homans** Memorial Fund (additional), . . | 516.75 | $18,594.25 |
| Income of Funds for Instruction, or for general purposes. | | |
| **Harvard** Medical Alumni, . . . . . | $175.13 | |
| Anonymous Fund in the Department of Theory and Practice, . . . . . | 512.73 | |
| **Edward M. Barringer** (part, see p. 132), . . | 896.12 | |
| Amounts carried forward, . . . . | $1,583.98 | $18,594.25 |

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## Table No. VI, Medical School, continued

### RECEIPTS

| | | |
|---|---|---|
| Amounts brought forward, | $1,583.98 | $18,594.25 |
| Income of Funds for Instruction (*continued*). | | |
| **Robert C. Billings,** | 5,050.00 | |
| **John B. and Buckminster Brown,** | 1,163.52 | |
| **Bullard** Professorship of Neuropathology, | 2,557.93 | |
| **Calvin and Lucy Ellis** (part, see p. 157), | 18,061.82 | |
| **George Fabyan** Foundation for Comparative Pathology (part, see p. 133), | 8,193.56 | |
| **Samuel E. Fitz,** | 92.72 | |
| **Henry Harris** (½ income, see p. 90), | 755.96 | |
| **Hersey** Professorship (⅔ income, see p. 101), | 408.38 | |
| **George Higginson,** | 5,243.11 | |
| **John Homans** Memorial, | 2,603.48 | |
| **Henry Jackson** Endowment, | 4,966.57 | |
| **Jackson** Professorship of Clinical Medicine, | 3,494.25 | |
| **Walter Augustus Lecompte** Professorship of Otology, | 2,534.19 | |
| **William O. Moseley,** | 2,683.82 | |
| New subscription, | 1,961.93 | |
| **Lyman Nichols,** | 506.01 | |
| **Henry L. Pierce** (Residuary), | 3,557.88 | |
| **John D. Rockefeller,** | 50,500.00 | |
| **Dr. Ruppaner,** | 471.47 | |
| **Henry Francis Sears** Fund for Pathology, | 1,767.50 | |
| **George C. Shattuck,** | 3,706.26 | |
| **James Stillman** Professorship, | 5,855.98 | |
| **Mary W. Swett,** | 796.13 | |
| **Samuel W. Swett,** | 1,010.00 | |
| **Quincy Tufts,** | 101.00 | |
| **Edward Wigglesworth** Professorship of Dermatology, | 2,566.92 | |
| **Henry Willard Williams,** | 2,074.39 | 134,268.76 |
| Interest on account of tuition fees paid in advance, | | 285.11 |
| Income of Fellowship Funds; Gift for Fellowship. | | |
| **Edward Austin** (part, see pp. 102, 103, 105). | | |
| **Austin** Teaching Fellowships, | $2,500.00 | |
| **Charles Follen Folsom** Memorial, | 223.41 | |
| **George Cheyne Shattuck** Memorial, | 277.20 | |
| **Charles Eliot Ware** " | 296.59 | |
| **John Ware** " | 274.57 | 3,571.77 |
| Income of Scholarship and Aid Funds. | | |
| Anonymous Aid, | $264.17 | |
| **Edward M. Barringer** (part, see p. 131), | 500.00 | |
| **Lucius F. Billings,** | 268.10 | |
| Amounts carried forward, | $1,032.27 | $156,719.89 |

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## Table No. VI, Medical School, continued

### RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, | | $1,032.27 | $156,719.89 |
| Income of Scholarship and Aid Funds (*continued*). | | | |
| **James Jackson Cabot,** | | 315.42 | |
| **David Williams Cheever,** | | 296.79 | |
| **Cotting** Gift, | | 164.13 | |
| **Orlando W. Doe,** | | 148.42 | |
| **Joseph Eveleth** (part, see p. 104), | | 600.00 | |
| **John Foster,** for Law students and for Medical students in alternate years, | | 160.14 | |
| **Lewis** and **Harriet Hayden,** | | 288.86 | |
| **William Hilton** (part, see p. 104), | | 450.00 | |
| **Claudius M. Jones,** | | 334.31 | |
| **Alfred Hosmer Linder,** | | 282.04 | |
| **Joseph Pearson Oliver,** | | 448.14 | |
| **Charles B. Porter,** | | 293.91 | |
| **Charles Pratt Strong,** | | 260.88 | |
| **Isaac Sweetser,** | | 335.98 | |
| **John Thomson Taylor,** | | 276.84 | |
| **Edward Wigglesworth,** | | 283.20 | 5,971.88 |
| Income of Prize Funds. | | | |
| **Ward Nicholas Boylston,** | | $209.37 | |
| **William H. Thorndike,** | | 415.51 | 624.88 |
| Income of Sundry Funds and Gifts for special purposes. | | | |
| **Edward Austin** (Bacteriological Laboratory), | | $579.44 | |
| **J. Ingersoll Bowditch,** | | 324.92 | |
| **Boylston,** for Medical Books, | | 77.42 | |
| **Caroline Brewer Croft** (part, see p. 157). | | | |
| Gift, | $5,000.00 | | |
| Interest, | 2,650.26 | 7,650.26 | |
| **George Fabyan** Foundation for Comparative Pathology, interest (part, see p. 132), | $2,279.23 | | |
| Returned from appropriation, | 258.69 | 2,537.92 | |
| **F. B. Greenough** (surgical research), | | 224.42 | |
| **Harriet Newell Lowell.** | | | |
| From Trustees, | $2,000.00 | | |
| Interest, | 58.93 | 2,058.93 | |
| Medical Library, | | 107.31 | |
| **Proctor,** for the study of Chronic Diseases | | 2,829.41 | |
| School of Comparative Medicine, | | 283.00 | |
| Surgical Laboratory. | | | |
| Interest, | $343.20 | | |
| Remainder of appropriation returned, | 21.20 | 364.40 | |
| **Warren** Fund for Anatomical Museum. | | | |
| Interest, | $625.80 | | |
| Gift, | 200.00 | 825.80 | |
| Amounts carried forward, | | $17,863.23 | $163,316.10 |

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## TABLE NO. VI, MEDICAL SCHOOL, CONTINUED

### RECEIPTS

| | | | |
|---|---|---|---|
| Amounts brought forward, | | $17,863.23 | $163,316.10 |
| Income of Sundry Funds and Gifts (*continued*). | | | |
| Interest on gifts for present use, | | 206.12 | 18,069.35 |
| Sale of loam, | | $241.50 | |
| Gifts for present use, | | 11,930.76 | |
| For heat supplied to the Carnegie Nutrition Laboratory, | | 231.25 | |
| For heat and power supplied to the House of the Good Samaritan, | | 3,220.78 | |
| From instructors for advertising summer courses, | | 270.00 | |
| Repayments of appropriations (balances), | | 558.75 | 16,453.04 |
| Receipts from students. | | | |
| Tuition fees, regular courses, | $59,530.72 | | |
| " " graduate courses, | 2,932.50 | | |
| " " Dental students, | 3,150.00 | | |
| " " summer courses, | 5,597.65 | $71,210.87 | |
| Graduation fees, | | 150.00 | |
| Matriculation fees, | | 485.00 | |
| Examination fees, | | 105.00 | |
| Laboratory fees and supplies. | | | |
| Anatomy, | $1,387.00 | | |
| Chemistry, | 1,029.49 | | |
| Clinical Laboratory, | 70.47 | | |
| Physiology, | 419.96 | | |
| Operative Surgery, | 159.00 | | |
| Surgical Technique, | 225.00 | 3,290.92 | |
| Use of microscopes, | | 259.00 | 75,500.79 |
| | | | $273,339.28 |

### PAYMENTS

(See also CONSTRUCTION ACCOUNTS, Table XXIV, page 159.)

| | | |
|---|---|---|
| From Fellowship Funds and Gift. | | |
| **Edward Austin** (part, see pp. 111, 112, 115). | | |
| **Austin** Teaching Fellowship, | $2,500.00 | |
| **George Cheyne Shattuck** Memorial, | 225.00 | |
| **Charles Eliot Ware** Memorial, | 225.00 | |
| **John Ware** Memorial, | 225.00 | $3,175.00 |
| From Scholarship and Aid Funds. | | |
| Anonymous Aid, | $200.00 | |
| **Edward M. Barringer** (part), | 500.00 | |
| **Lucius F. Billings,** | 200.00 | |
| **James Jackson Cabot,** | 275.00 | |
| **David Williams Cheever,** | 250.00 | |
| **Cotting** Gift, | 125.00 | |
| **Orlando W. Doe,** | 100.00 | |
| **Joseph Eveleth** (part, see p. 113), | 600.00 | |
| Amounts carried forward, | $2,250.00 | $3,175.00 |

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## Table No. VI, Medical School, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, | $2,250.00 | $3,175.00 |
| From Scholarship and Aid Funds (*continued*). | | |
| **John Foster,** | 38.75 | |
| **Lewis and Harriet Hayden,** | 225.00 | |
| **William Hilton** (part, see p. 113), | 450.00 | |
| **Claudius M. Jones,** | 250.00 | |
| **Alfred Hosmer Linder,** | 200.00 | |
| **Joseph Pearson Oliver,** | 325.00 | |
| **Charles B. Porter,** | 225.00 | |
| **Charles Pratt Strong,** | 100.00 | |
| **Isaac Sweetser,** | 250.00 | |
| **John Thomson Taylor,** | 200.00 | |
| **Edward Wigglesworth,** | 200.00 | 4,713.75 |
| From Prize Fund. | | |
| **Boylston,** prize and advertising, | | 87.50 |
| From Sundry Funds and Gifts for special purposes. | | |
| **Edward Austin** (Bacteriological Laboratory), | $650.30 | |
| **Robert C. Billings,** Journal of Medical Research, | 500.00 | |
| **J. Ingersoll Bowditch,** Physiology, | 262.63 | |
| **Bullard** Professorship of Neuropathology, | 631.75 | |
| **Caroline Brewer Croft** (part), cancer investigations, | 2,332.42 | |
| **George Fabyan** Foundation for Comparative Pathology (part), services, | 2,279.23 | |
| Gifts for Anatomical Research, | 256.52 | |
| **Walter Augustus Lecompte** Professorship of Otology, | 460.47 | |
| **Proctor,** for the study of Chronic Diseases, | 2,887.14 | |
| **Henry Francis Sears** Fund for Pathology, | 1,571.96 | |
| Surgical Laboratory, | 1,892.40 | |
| **Warren** Fund for Anatomical Museum, | 1,627.93 | |
| **Edward Wigglesworth** Professorship of Dermatology (part), services, | 360.00 | |
| Sundry Gifts (balances), $11,536.76 | | |
| Less paid for salaries, 7,600.00 | 3,936.76 | 19,649.51 |
| Appropriations. | | |
| Anatomy, | $2,095.00 | |
| Comparative Anatomy, | 1,485.25 | |
| Bacteriology, | 985.00 | |
| Books and service for the library, | 4,000.00 | |
| Biological Chemistry, | 2,799.57 | |
| Hygiene, | 760.00 | |
| Boston Medical Library, for use of, | 150.00 | |
| Clinical Medicine, | 50.00 | |
| Obstetrics, | 50.00 | |
| Amounts carried forward, | $12,374.82 | $27,625.76 |

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## Table No. VI, Medical School, continued

### PAYMENTS

| | | | |
|---|---|---|---|
| Amount brought forward, | | $12,374.82 | $37,625.76 |
| Appropriations (*continued*). | | | |
| Pathology, | | 330.00 | |
| Comparative Pathology, | | 45.00 | |
| Surgery, | $970.00 | | |
| Microscopes, | 360.00 | 1,330.00 | |
| Animal Surgery, | | 250.00 | |
| Theory and Practice, | $1,140.00 | | |
| Microscopes, | 2,500.00 | 3,640.00 | |
| Physiology, | | 2,589.96 | |
| Comparative Physiology, | | 685.00 | |
| Materia Medica, | | 810.00 | |
| Warren Anatomical Museum, | | 55.00 | 22,609.78 |
| Graduate courses, fees repaid to Instructors, | | $2,932.50 | |
| Summer " " " " | | 8,501.50 | 11,434.00 |
| Salaries for instruction, | | | 106,366.67 |
| Retiring allowance, | | | 1,000.00 |
| General Expenses. | | | |
| Dean and Secretary, | | $500.00 | |
| Clerical services, | | 1,620.00 | |
| Repairs and improvements, | | 4,829.85 | |
| Care and cleaning, | | 15,623.73 | |
| Fuel, | | 11,352.69 | |
| Water, | | 1,686.10 | |
| Lighting and gas, | | 453.76 | |
| Printing, | | 557.00 | |
| Furniture, | | 887.63 | |
| Stationery and postage, | | 186.48 | |
| Telephones, not charged to appropriations. | | | |
| Dean's office, | $75.69 | | |
| Information office, | 91.92 | | |
| Mechanic's shop, | 42.99 | 210.60 | |
| Advertising and catalogues, | | 1,414.00 | |
| Proctors, | | 51.00 | |
| Mechanics and laboratory attendants, | | 10,253.17 | |
| Watchman, | | 1,456.79 | |
| Diplomas, | | 90.75 | |
| Washing towels, | | 222.14 | |
| Labor, | | 1,326.21 | |
| Freight, | | 131.20 | |
| Removing moths, | | 37.29 | |
| Supplies and material, | | 1,816.52 | |
| Sundries, | | 122.74 | |
| Interest on advances, | | 318.65 | 55,148.30 |
| Amount carried forward, | | | $224,184.51 |

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## Table No. VI, Medical School, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $224,184.51 |
| Amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, | | 759.86 |
| University charge (see p. 89). | | |
| President's Office, salaries and expenses, | $996.20 | |
| Treasurer's Office, care of investments, | 2,401.04 | |
| Bursar's Office, collections and payments, | 829.06 | |
| Retiring allowances, | 212.42 | |
| Inspector of Grounds and Buildings, salary and expenses, | 668.33 | |
| Publication Office, salary and expenses, | 131.82 | |
| Quinquennial Catalogue, | 43.11 | |
| Annual Catalogue, | 301.11 | 5,583.09 |
| | | $230,527.46 |

## Table No. VII

## DENTAL SCHOOL

### RECEIPTS

| | | | |
|---|---|---|---|
| Income of Funds and Gifts. | | | |
| Dental School balance (interest on), | | $716.90 | |
| Dental School Endowment, | | 114.43 | |
| Henry C. Warren Endowment, | | 1,161.50 | |
| Gifts for building and for endowment. | | | |
| To Harvard Dental Alumni Fund, | $860.50 | | |
| Other gifts, | 30,430.00 | | |
| Interest, | 1,601.86 | 32,892.36 | $34,885.19 |
| Interest on tuition fees paid in advance, | | | 54.91 |
| Gifts for present use, | | | 40.27 |
| Receipts from students. | | | |
| Tuition fees, regular courses, | $11,465.00 | | |
| " " special " | 40.00 | | |
| " " summer " | 350.00 | | |
| | $11,855.00 | | |
| Less transferred to Medical School, | 3,150.00 | $8,705.00 | |
| Examination fees, | | 33.00 | |
| Laboratory fees, | | 3,306.60 | |
| Use of microscopes, | | 64.00 | |
| Chemistry, breakage and supplies, | | 249.02 | 12,357.62 |
| Fees from infirmary, | | | 4,724.33 |
| Sale of gold, platinum, and sweepings, | | $306.33 | |
| " scraps and old materials, | | 65.61 | |
| " reagent boxes, | | 6.75 | 378.69 |
| Receipts from real estate, | | | 334.70 |
| | | | $52,775.71 |

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## Table No. VII, Dental School, continued

### PAYMENTS

| | | |
|---|---|---|
| Salaries for instruction, | $6,516.00 | |
| Secretary, | 700.00 | |
| Proctors, | 14.00 | |
| Repairs and improvements, | 747.28 | |
| Care and cleaning, | 1,071.15 | |
| Fuel, | 285.25 | |
| Water, | 77.00 | |
| Lighting, | 360.21 | |
| Printing, | 291.70 | |
| Furniture, | 12.80 | |
| Instruments and apparatus, | 48.89 | |
| Stationery and postage, | 259.40 | |
| Telephone, | 167.73 | |
| Books, | 1.10 | |
| Binding, | 34.85 | |
| Advertising, | 437.80 | |
| Diplomas, | 39.60 | |
| Services and wages, | 2,499.13 | |
| Annual Catalogue of the Dental School, | 125.10 | |
| Expenses in preparing for a new building, | 144.83 | |
| Travelling expenses to other schools, | 59.30 | |
| Hospitality, | 32.00 | |
| Laboratory expenses, | 110.40 | |
| Clinical expenses, | 26.30 | |
| Washing towels, | 427.61 | |
| Supplies, &c., | 5,293.12 | |
| Sundries, | 61.50 | $19,844.05 |
| Real Estate. Expenses, | | 958.85 |
| Amount unpaid on term-bills issued before August 1, 1907, charged off, but not remitted, | | 229.88 |
| University charge (see p. 89). | | |
| President's Office, salary and expenses, | $196.35 | |
| Treasurer's Office, care of investments, | 68.20 | |
| Bursar's Office, collections and payments, | 136.65 | |
| Publication Office, salary and expenses, | 98.69 | |
| Quinquennial Catalogue, | 5.39 | |
| Annual Catalogue of the University, | 100.37 | |
| Retiring allowances, | 7.22 | 612.87 |
| | | $21,645.65 |

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## Table No. VIII

## BUSSEY INSTITUTION

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds. | | |
| **Bussey** Institution balance (interest on), . . . . | $1,551.92 | |
| **Bussey** Trust (part, see pp. 126, 129, 157), . . . | 13,057.02 | $14,608.49 |
| Gift for present use, . . . . . | | 1,000.00 |
| Tuition fees, . . . . . | | 3,045.00 |
| Interest on tuition fees paid in advance, . . . . . | | 12.76 |
| Sale of wood, hay and sundries, . . . . . | $233.32 | |
| Horticultural Department, prizes, sale of flowers, plants, &c., | 1,404.80 | |
| Board of animals, . . . . . | 6,258.54 | |
| Use of houses by College officers, . . . . . | 1,325.32 | 9,221.98 |
| Insurance premium repaid, . . . . . | | 6.88 |
| | | $27,895.56 |

### PAYMENTS

(See also Construction Accounts, Table XXIV, p. 150.)

| | | |
|---|---|---|
| Salaries, . . . . . | $8,400.00 | |
| Services and wages, . . . . . | 3,803.08 | |
| Repairs and improvements, . . . . . | 594.38 | |
| Fuel, . . . . . | 857.00 | |
| Lighting, . . . . . | 6.00 | |
| Water, . . . . . | 37.60 | |
| Printing, . . . . . | 9.25 | |
| Stationery and postage, . . . . . | 39.08 | |
| Books, . . . . . | 55.08 | |
| Advertising, . . . . . | 44.70 | |
| Horticultural Department, expenses, . . . . . | 1,668.38 | |
| Grain, farming tools, &c., . . . . . | 3,645.45 | |
| Diplomas, . . . . . | 6.31 | |
| Insurance, . . . . . | 548.80 | |
| Legal expenses, . . . . . | 25.00 | |
| Sundries, . . . . . | 9.95 | $19.750.06 |
| University charges (see p. 89). | | |
| President's Office, salary and expenses, . . . . . | $63.52 | |
| Treasurer's Office, care of investments, . . . . . | 144.39 | |
| Bursar's Office, collections and payments, . . . . . | 128.77 | |
| Publication Office, salary and expenses, . . . . . | 1.89 | |
| Annual Catalogue, . . . . . | 40.15 | 378.72 |
| | | $20,128.78 |

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## Table No. IX

## ARNOLD ARBORETUM

### RECEIPTS

| | | | |
|---|---|---|---|
| **Gift for capital account.** | | | |
| **Arnold** Arboretum Fund (additional), | | | $975.00 |
| **Income of Funds and of Gifts.** | | | |
| **Arnold** Arboretum balance (interest on), | | $6,417.84 | |
| **James Arnold,** | | 8,143.73 | |
| **Robert Charles Billings** (part), | | 679.25 | |
| **William L. Bradley.** | | | |
| Income, | $1,160.74 | | |
| Gift, | 1,200.00 | 2,360.74 | |
| **Francis Skinner,** | | 1,010.00 | |
| **Bussey,** for the **Arnold** Arboretum, | | 116.56 | |
| Gifts for construction (interest on balance), | | 501.33 | |
| Gift for books (interest on balance), | | 28.69 | 19,258.14 |
| **Gifts for botanical exploration in Western China.** | | | |
| Gifts, | | $3,944.00 | |
| Interest, | | 195.57 | 4,139.57 |
| Gift for books, | | $2,500.00 | |
| Gifts for other present uses, | | 2,000.00 | |
| " real estate and construction, | | 200.00 | |
| Sale of grass and materials, | | 2,351.72 | 7,051.72 |
| | | | $31,494.43 |

### PAYMENTS

| | | |
|---|---|---|
| From **William L. Bradley** Fund, bibliography, | | $1,535.32 |
| Botanical exploration in Western China, from gifts, | | 5,591.32 |
| Books from gifts, | | 4,505.23 |
| Salaries of Director and Assistants, | $5,750.00 | |
| Repairs and improvements, | 914.62 | |
| Labor, | 6,248.79 | |
| Fuel, | 445.20 | |
| Water, | 68.00 | |
| Furniture, | 250.25 | |
| Stationery and postage, | 356.58 | |
| Books, | 121.57 | |
| Printing, | 1.00 | |
| Services and wages, | 6,395.11 | |
| Supplies, tools, and materials, | 1,068.92 | |
| Taxes, | 318.24 | |
| Freight, | 411.04 | |
| Amounts carried forward, | $22,349.32 | $11,632.47 |

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## Table No. IX, Arnold Arboretum, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, | $22,349.32 | $11,622.47 |
| Expenses of expeditions for collecting, | 262.64 | |
| Sundries, | 9.06 | 22,621.02 |
| | | $34,243.49 |
| University charge (see p. 89). | | |
| Treasurer's Officer, care of investments, | $371.34 | |
| Bursar's Office, collections and payments, | 103.35 | 474.69 |
| | | $34,718.18 |

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## Table No. X

## BOTANIC GARDEN AND BOTANICAL MUSEUM

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds. | | |
| Botanic Department (⅓ income, see p. 107), | $1,255.56 | |
| Centennial Fund, | 42.98 | |
| **Lowell**, for a Botanic Garden, | 3,353.55 | |
| **John L. Russell** (¼ income, see p. 142), | 25.25 | $4,677.29 |
| Gifts. | | |
| For cases. Interest, | $14.05 | |
| For sugar-cane investigations. Interest, | 19.32 | |
| For immediate use, | 3,600.00 | 3,633.37 |
| Repayment, by the Gray Herbarium, of charges in 1906–07 which should have been charged to the Gray Herbarium, | | 404.21 |
| Laboratory fees in Botany 1, less expenses, | | 259.65 |
| Sale of botanical material, | | 250.00 |
| Use of house, | | 700.00 |
| | | $9,924.52 |

### PAYMENTS

| | | |
|---|---|---|
| From gift for sugar-cane investigations, | | $127.00 |
| Services and wages, | $3.09 | |
| Labor, | 4,942.87 | |
| Repairs and improvements, | 421.86 | |
| Fuel, | 707.95 | |
| Water, | 179.79 | |
| Stationery and postage, | 5.65 | |
| Telephone, | 47.59 | |
| Printing, | 2.80 | |
| Books, | 14.50 | |
| Taxes, | 169.20 | |
| Amounts carried forward, | $6,495.30 | $127.00 |

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## Table No. X, Botanic Garden and Botanical Museum, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, | $6,495.00 | $127.00 |
| Apparatus, | 36.00 | |
| Interest on advances, | 367.62 | |
| Supplies and sundries, | 1,391.68 | |
| Freight, | 89.63 | |
| Cases bought with general income, | 628.09 | 9,008.32 |
| | | $9,135.32 |
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $95.38 | |
| Bursar's Office, collections and payments, | 53.84 | |
| Publication Office, salary and expenses, | .71 | 149.93 |
| | | $9,285.25 |

## Table No. XI

## GRAY HERBARIUM

### RECEIPTS

| | | |
|---|---|---|
| Gift for Capital Account. | | |
| **Sarah E. Potter** Endowment Fund (additional), | $139,204.68 | |
| **Asa Gray** Memorial (additional), | 100.00 | $139,304.68 |
| Income of Funds. | | |
| **Gray** Herbarium balance (interest on), | $14.04 | |
| **Robert Charles Billings,** | 757.50 | |
| **Asa Gray** Memorial, | 1,648.12 | |
| Herbarium, | 1,043.13 | |
| **Sarah E. Potter** Endowment, | 4,879.34 | |
| **John L. Russell** (¾ income, see p. 141), | 75.75 | 8,417.88 |
| **Asa Gray's** copyrights, | | 799.33 |
| Gifts for immediate use, | | 2,238.00 |
| Sale of card index, | | 2,850.43 |
| | | $153,610.32 |

### PAYMENTS

| | |
|---|---|
| Salaries, | $5,450.00 |
| Services and wages, | 2,889.12 |
| Care and cleaning, | 192.65 |
| Repairs and improvements, | 269.76 |
| Furniture, | 13.39 |
| Stationery and postage, | 81.10 |
| Telephone, | 41.45 |
| Printing, | 54.53 |
| Books, | 667 24 |
| Binding, | 112.40 |
| Amount carried forward, | $9,771.64 |

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## TABLE NO. XI, GRAY HERBARIUM, CONTINUED

### PAYMENTS

| | | | |
|---|---|---|---|
| Amount brought forward, | | $9,771.64 | |
| Legal services, | | 107.91 | |
| Expedition to Labrador, | | 400.00 | |
| Advertising, | | 4.00 | |
| Freight, | | 79.17 | |
| Supplies and sundries. | | | |
| For 1907–08, | $1,751.98 | | |
| Repayment to Botanic Garden for 1906–07, | 404.21 | 2,156.19 | $12.518.91 |
| University charge (see p. 89). | | | |
| Treasurer's Office, care of investments, | | $78.47 | |
| Bursar's Office, collections and payments, | | 51.36 | |
| Publication Office, salary and expenses, | | 11.83 | 141.66 |
| | | | $12,660.57 |

## TABLE NO. XII

## OBSERVATORY

### RECEIPTS

| | | | |
|---|---|---|---|
| Income of Funds and Gift. | | | |
| Advancement of Astronomical Science (1902). | | | |
| Interest (part, see p. 157), | $452.29 | | |
| Sale, | 14.82 | $467.11 | |
| **Thomas G. Appleton,** | | 252.50 | |
| **J. Ingersoll Bowditch,** | | 126.25 | |
| **Uriah A. Boyden.** | | | |
| Interest, | $9,643.93 | | |
| Insurance for loss of instruments, | 66.80 | 9,710.73 | |
| **Charlotte Harris,** | | 101.00 | |
| **Haven,** | | 2,272.50 | |
| **James Hayward,** | | 1,060.50 | |
| Observatory Endowment, | | 2,525.00 | |
| **Paine** Professorship, | | 2,525.00 | |
| **Robert Treat Paine,** | | 13,833.57 | |
| **Edward B. Phillips,** | | 5,569.85 | |
| **Josiah Quincy,** | | 783.81 | |
| **James Savage** (½ net income, see pp. 105, 124), | | 455.25 | |
| **David Sears,** | | 2,076.76 | |
| **Augustus Story,** | | 675.69 | $42,435.52 |
| Anonymous gift for special use, interest, | | | 105.39 |
| **Mrs. Henry Draper,** gift for special research (additional), | | $10,000.00 | |
| Interest, | | 78.63 | 10,078.63 |
| Amount carried forward, | | | $52,619.54 |

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## TABLE NO. XII, OBSERVATORY, CONTINUED

### RECEIPTS

| | | |
|---|---|---|
| Amount brought forward, | | $52,619.54 |
| From Trustees of Sturgis Fund, for printing Annals, | | 2,628.78 |
| Gifts for present use, | | 3,000.00 |
| Use of house by College officer, | $600.00 | |
| Sale of Annals, | 27.11 | |
| " slides, | 105.50 | 732.61 |
| Award of insurance for loss of instruments, | | 250.00 |
| | | $59,230.93 |

### PAYMENTS

| | | |
|---|---|---|
| From Advancement of Astronomical Science Fund (1902) (part, see p. 157), | | $1,114.33 |
| " Uriah A. Boyden Fund, supplies, apparatus, services, &c., | | 11,287.01 |
| " Draper Memorial, supplies, apparatus, services, &c., | $9,890.39 | |
| Less amount included in salaries, | 3,000.00 | 6,890.39 |
| " Josiah Quincy Fund, for printing Annals, Vol. 62, | | 558.11 |
| Salaries, | $18,200.00 | |
| Services and wages, | 8,729.29 | |
| Repairs and improvements, | 1,632.84 | |
| Care and cleaning, | 566.77 | |
| Labor, | 1,450.46 | |
| Fuel, | 557.49 | |
| Water, | 129.79 | |
| Lighting, | 117.34 | |
| Printing, | 4,414.97 | |
| Furniture, | 241.53 | |
| Instruments and apparatus, | 2,112.41 | |
| Stationery, postage, and telegraphing, | 193.23 | |
| Telephone, | 76.75 | |
| Books, | 333.07 | |
| Binding, | 621.15 | |
| Insurance, | 67.04 | |
| Freight, | 388.21 | |
| Use of house, | 90.00 | |
| Electric power, | 100.68 | |
| Interest on advances, | 51.23 | |
| Supplies and materials, | 1,202.95 | |
| Sundries, | 24.00 | 41,301.30 |
| | | $61,150.94 |

| | | |
|---|---|---|
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $893.25 | |
| Bursar's Office, collections and payments, | 248.32 | |
| Publication Office, salary and expenses, | 1,168.87 | 2,310.44 |
| | | $63,461.38 |

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## Table No. XIII

## MUSEUM OF COMPARATIVE ZOÖLOGY

### RECEIPTS

| | | |
|---|---|---|
| Gift for Capital Account. | | |
| **Maria Whitney** Fund, | | $5,000.00 |
| Income of Funds. | | |
| Museum of Comparative Zoölogy balance (int. on), | $1,619.74 | |
| **Agassiz** Memorial, | 15,045.62 | |
| **Teachers and Pupils,** | 383.50 | |
| **Virginia Barret Gibbs** Scholarship, | 294.97 | |
| **Gray** Fund for Zoölogical Museum, | 2,525.00 | |
| **Sturgis Hooper,** | 5,443.54 | |
| **Humboldt,** | 390.92 | |
| **Willard Peele Hunnewell,** | 252.50 | |
| Permanent Fund for Museum of Zoölogy, | 5,932.18 | |
| **Henry L. Pierce** (Residuary), (part, see p. 124), | 4,658.15 | |
| **Maria Whitney,** | 200.00 | 36,746.12 |
| Use of lecture rooms by Radcliffe College, | | 700.00 |
| | | $42,446.12 |

### PAYMENTS

| | | |
|---|---|---|
| From **Sturgis Hooper** Fund. | | |
| Salary of **Sturgis Hooper** Professor, $5,000.00 | | |
| Expenses, 128.90 | $5,128.90 | |
| From **Virginia Barret Gibbs** Scholarship Fund, | | |
| Scholarship, | 250.00 | $5,378.90 |
| Salaries, | $11,100.00 | |
| Services and wages, | 4,797.21 | |
| Repairs and improvements, | 3,012.65 | |
| Care and cleaning, | 3,482.38 | |
| Fuel, | 1,661.87 | |
| Water, | 58.80 | |
| Gas, | 9.99 | |
| Printing, | 2,727.11 | |
| Cases, | 2,821.26 | |
| Stationery and postage, | 46.50 | |
| Telephone, | 47.49 | |
| Books, | 2,106.69 | |
| Binding, | 891.94 | |
| Instruments and apparatus, | 2.50 | |
| Watchmen, | 1,002.00 | |
| Collections, | 2,923.48 | |
| Freight, | 373.32 | |
| Board and lodging of students at Bermuda Biological Station, | 295.70 | |
| Amounts carried forward, | $37,360.89 | $5,378.90 |

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## Table No. XIII, Museum of Comparative Zoölogy, continued

### PAYMENTS

| | | | |
|---|---|---|---|
| Amounts brought forward, | | $37,360.89 | $5,378.90 |
| Travelling expenses, | | 70.00 | |
| Insurance, | | 140.00 | |
| Supplies and sundries, | | 1,987.91 | |
| | | $39,558.80 | |
| University charge (see p. 89). | | | |
| Treasurer's Office, care of investments, | $762.08 | | |
| Bursar's Office, collections and payments, | 220.08 | | |
| Publication Office, salary and expenses, | 645.47 | | |
| Watchmen, | 327.58 | 1,955.21 | |
| | | $41,514.01 | |
| Less the following items. | | | |
| Amount paid from College income (see Table II, page 117): — | | | |
| Heating and service, | $3,287.50 | | |
| Librarian's salary (part), | 250.00 | | |
| Watchman (part), | 240.00 | | |
| Publishing contributions from the Laboratories of Geography and Zoölogy, | 300.00 | | |
| | $4,077.50 | | |
| University charge transferred to University (see Table I, p. 95), | 1,955.21 | 6,032.71 | 35,481.30 |
| | | | $40,860.20 |

## Table No. XIV

## PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds. | | |
| Anonymous Fellowship in Central American Archaeology. | | |
| Gift, | $1,200.00 | |
| Interest, | 13.90 | $1,213.90 |
| **Hemenway** Fellowship, | | 652.61 |
| **Peabody** Building, | | 1,472.89 |
| **Peabody** Collection, | | 2,458.70 |
| **Peabody** Professor, | | 2,460.41 |
| **Thaw** Fellowship, | | 1,186.92 |
| **Henry C. Warren** Exploration, | | 526.11 |
| **Susan Cornelia Warren**, | | 252.50 |
| Amount carried forward, | | $10,224.04 |

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## Table No. XIV, Peabody Museum, continued

### RECEIPTS

| | | |
|---|---|---|
| Amount brought forward, | $10,224.04 | |
| **Robert C. Winthrop** Scholarship, | 295,98 | |
| **Huntington Frothingham Wolcott**, | 1,056.06 | $11,576.08 |
| Use of heating plant, | | 75.00 |
| Gifts. | | |
| For South American expedition. Gifts, $5,449.92 | | |
| Interest, 19.08 | $5,469.00 | |
| For other present uses, | 2,740.00 | 8,209.00 |
| | | $19,860.08 |

### PAYMENTS

| | | |
|---|---|---|
| From **Henry C. Warren** Fund, explorations, | | $913.22 |
| " **Huntington Frothingham Wolcott** Fund, specimens, | | 993.33 |
| " Gifts for South American Expedition, | | 5,861.27 |
| **Hemenway** Fellowship, | | 1,000.00 |
| **Thaw** Fellowship, | | 1,169.37 |
| **Robert C. Winthrop** Scholarship, | | 225.00 |
| Anonymous Fellowship, | | 600.00 |
| Salary of Professor and Curator, | $2,385.60 | |
| Services and wages, | 2,764.98 | |
| Repairs and improvements, | 411.88 | |
| *Care and cleaning, | 1,158.52 | |
| *Fuel, | 238.32 | |
| Water, | 24.00 | |
| *Lighting, | 14.65 | |
| Printing, | 33.15 | |
| Furniture, | 116.14 | |
| Stationery and postage, | 122.97 | |
| Telephone, | 43.33 | |
| Books, | 171.51 | |
| Binding, | 112.00 | |
| Collections and expenses, | 50.00 | |
| Explorations, | 894.50 | |
| Freight, | 164.68 | |
| Supplies, | 156.74 | |
| Sundries, | 25.50 | |
| Interest on advances, | 124.84 | |
| | $9,013.31 | |
| Less items marked *, included below, formerly paid from University income (see Table I, page 92), | 1,411.49 | 7,601.82 |
| | | $18,364.01 |
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $214.70 | |
| Bursar's Office, collections and payments, | 35.54 | |
| Amounts carried forward, | $250.24 | $18,364.01 |

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## Table No. XIV, Peabody Museum, continued

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, | $250.24 | $18,364.01 |
| University charge (*continued*). | | |
| Inspector of Grounds and Buildings, salary and expenses, | 110.86 | |
| Publication Office, salary and expenses, | 7.81 | |
| Watchmen, | 60.17 | |
| Total of items marked *, deducted above, | 1,411.49 | 1,840.57 |
| | | $20,204.58 |
| Less University charge transferred. | | |
| 90% to University (see p. 95), | $1,656.52 | |
| 10% to College (see p. 122), | 184.05 | 1,840.57 |
| | | $18,364.01 |

## Table No. XV

## SEMITIC MUSEUM

### RECEIPTS

| | | |
|---|---|---|
| Gifts for Semitic Collection. Interest, | | $394.60 |
| Gifts for excavations in Palestine. | | |
| Gift, | $1,000.00 | |
| Interest, | 44.63 | 1,044.63 |
| | | $1,439.23 |

### PAYMENTS

| | | |
|---|---|---|
| From gift for excavations in Palestine, | $10,342.80 | |
| From gifts for Semitic Collection, | 2,946.91 | $13,289.71 |
| General expenses. | | |
| Curator, | $500.00 | |
| Repairs and improvements, | 38.92 | |
| Care and cleaning, | 737.85 | |
| Fuel, | 256.60 | |
| Water, | 17.60 | |
| Lighting, | 4.52 | |
| Furniture, | 9.84 | |
| Electric power, | 33.00 | |
| Stationery and postage, | .60 | |
| Supplies and sundries, | 19.83 | |
| Use of Peabody Museum heating plant, | 75.00 | |
| | $1,693.76 | |
| These general expenses were paid formerly from University income (see Table I, page 92), | 1,693.76 | |
| Amount carried forward, | | $13,289.71 |

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## Table No. XV, Semitic Museum, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $13,289.71 |
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $14.32 | |
| Bursar's Office, collections and payments, | 6.11 | |
| Inspector of Grounds and Buildings, salary and expenses, | 53.14 | |
| Watchmen, | 29.08 | |
| Total of general expenses deduced above, | 1,693.76 | 1,796.61 |
| | | $15,086.32 |
| Less University charge transferred. | | |
| 70% to University (see p. 95), | $1,257.63 | |
| 30% to Divinity School (see p. 129), | 538.98 | 1,796.61 |
| | | $13,289.71 |

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## Table No. XVI

## GERMANIC MUSEUM

### RECEIPTS

| | | |
|---|---|---|
| Gifts for Capital Account. | | |
| Emperor William Fund (additional), | | $50.00 |
| Gifts for present use. | | |
| Germanic Museum Building Fund, | | 450.00 |
| Income of Funds and Gifts. | | |
| Emperor William, | $1,329.26 | |
| Germanic Museum Building Fund, | 6.11 | 1,335.37 |
| Sale of Handbooks, | | 50.25 |
| | | $1,885.62 |

### PAYMENTS

| | | |
|---|---|---|
| From unrestricted gift, | | $204.06 |
| General expenses. | | |
| Repairs and improvements, | $67.37 | |
| Care and cleaning, | 449.48 | |
| Fuel, | 159.99 | |
| Water, | 5.00 | |
| Lighting, | 59.90 | |
| Insurance, | 86.65 | |
| Electric power, | 54.74 | |
| Sunday and Thursday opening of Museum, | 211.94 | |
| Hand-book, | 162.94 | |
| Postage, | 16.08 | 1,224.09 |
| Amount carried forward, | | $1,428.15 |

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## Table No. XVI, Germanic Museum, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $1,428.15 |
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $24.07 | |
| Bursar's Office, collections and payments, | 6.96 | |
| Inspector of Grounds and Buildings, salary and expenses, | 13.32 | |
| Watchmen, | 7.27 | |
| Publication Office, salary and expenses, | 38.57 | 90.19 |
| | | $1,518.34 |
| Less University charge transferred to University (see p. 95), | | 90.19 |
| | | $1,428.15 |

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## Table No. XVII

## WILLIAM HAYES FOGG ART MUSEUM

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds. | | |
| **William Hayes Fogg,** | $2,525.00 | |
| **Gray** Fund for Engravings, | 840.07 | |
| **William M. Prichard,** | 927.08 | |
| **John Witt Randall,** | 1,776.64 | |
| **Mary R. Searle,** | 99.59 | |
| Sale of photographs and catalogue, | 31.45 | |
| Repayment by the College for water supplied to the fountain near the Museum in 1906–07, | 46.00 | |
| For work in connection with photographs sold, | 76.19 | $6,322.02 |
| | | $6,322.02 |

### PAYMENTS

| | | |
|---|---|---|
| From the following Funds: — | | |
| **Gray** Fund for Engravings. | | |
| Curator, | $250.00 | |
| Collections, | 750.00 | |
| Expenses, | 170.03 | $1,170.03 |
| **William M. Prichard,** collections, | | 1,510.59 |
| **John Witt Randall.** | | |
| Curator, | $250.00 | |
| Collections, | 38.25 | |
| Expenses, | 621.61 | 909.86 |
| **Mary R. Searle,** books, | | 56.17 |
| **William Hayes Fogg** Fund and Art Museum balance. | | |
| Director, | $500.00 | |
| Services and wages, | 1,478.95 | |
| Amounts carried forward, | $1,978.95 | $3,646.65 |

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## Table No. XVII, William Hayes Fogg Art Museum, cont'd

### PAYMENTS

| | | |
|---|---|---|
| Amounts brought forward, | $1,978.95 | $3,646.65 |
| *Care and cleaning, | 1,497.42 | |
| Repairs and improvements, | 186.97 | |
| *Fuel, | 803.88 | |
| *Water, | 13.05 | |
| *Lighting, | 143.72 | |
| Furniture, | 24.57 | |
| Insurance, | 13.60 | |
| *Telephone, | 15.57 | |
| Work on collections, | 3.77 | |
| *Electric power, | 22.00 | |
| Freight, | 68.43 | |
| Supplies and sundries, | 2.14 | |
| | $4,723.57 | |
| Less items marked *, included below, formerly paid from University income (see Table I, p. 92), | 2,495.14 | 2,228.43 |
| | | $5,875.08 |
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $125.46 | |
| Bursar's Office, collections and payments, | 23.92 | |
| Inspector of Grounds and Buildings, salary and expenses, | 39.72 | |
| Watchmen, | 21.66 | |
| Total of items marked *, deduced above, | 2,495.14 | 2,705.90 |
| | | $8,580.98 |
| Less University charge transferred. | | |
| 10% to University (see p. 95), | $270.06 | |
| 90% to College (see p. 122), | 2,435.84 | 2,705.90 |
| | | $5,875.08 |

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## Table No. XVIII

## JEFFERSON PHYSICAL LABORATORY

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds. | | |
| **Jefferson** Physical Laboratory balance (interest on), | $94.28 | |
| Physical Laboratory Endowment, | 3,787.50 | |
| **Joseph Lovering** | 421.62 | |
| **T. Jefferson Coolidge,** for Research in Physics. | | |
| Loans to be used in place of income. | | |
| Loan, $2,500.00 | | |
| Interest, 57.01 | 2,557.01 | |
| Anonymous Gift for Physical Research, interest, | 28.79 | $6,889.20 |
| Amount carried forward, | | $6,889.20 |

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## Table No. XVIII, Jefferson Physical Laboratory, continued

### RECEIPTS

| | | |
|---|---|---|
| Amount brought forward, | | $6,889.20 |
| Gifts for the salary of a Fellow for Research in Physics. | | |
| Gifts, | $2,000.00 | |
| Interest, | 23.78 | 2,023.78 |
| Sale of old steam engine, | | 87.00 |
| | | $8,999.98 |

### PAYMENTS

| | | |
|---|---|---|
| Research in Physics, from | | |
| T. Jefferson Coolidge Fund, | $2,403.26 | |
| Joseph Lovering Fund, | 326.51 | |
| Anonymous gift for Physical Research, | 426.21 | $3,155.98 |
| Printing, | $212.16 | |
| Repairs, | 166.23 | |
| Care and cleaning, | 1,078.00 | |
| Fuel, | 477.94 | |
| Water, | 53.64 | |
| Lighting, | 259.50 | |
| Telephone, | 72.89 | |
| Insurance, | 132.45 | |
| Services and wages, | 848.00 | |
| Electric power, | 380.96 | |
| Supplies and sundries, | 5.81 | |
| | $3,687.58 | |
| Less the following, paid from College income (see Table II, page 117) :— | | |
| Repairs, $166.23 | | |
| Fuel, services, etc., 600.00 | 766.23 | 2,921.35 |
| | | $6,077.33 |
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $83.60 | |
| Bursar's Office, collections and payments, | 19.72 | |
| Watchmen, | 85.50 | |
| Publication Office, salary and expenses, | 50.17 | 238 99 |
| | | $6,316.33 |

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## Table No. XIX

## APPLETON CHAPEL

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds. | | |
| Fund for Religious Services, | $52.22 | |
| Increase Sumner Wheeler, | 2,525.00 | $2,577.22 |

### PAYMENTS

| | | |
|---|---|---|
| Preaching and morning services, | $3,174.65 | |
| Administrator, | 600.00 | |
| Organist and Choir-master, | 2,000.00 | |
| Choir, | 1,600.00 | |
| Repairs and improvements, | 146.50 | |
| Care and cleaning, | 335.52 | |
| Fuel, | 391.50 | |
| Water, | 2.53 | |
| Lighting, | 252.03 | |
| Furniture, | 174.53 | |
| Music, | 301.15 | |
| Binding, | 31.37 | |
| Electric power, | 8.43 | |
| Repairing and tuning organ, | 73.42 | |
| Insurance, | 6.20 | |
| Sundries, | 59.71 | |
| | $9,157.54 | |
| Less amount included below, formerly paid from University income (see Table I, page 92), | 6,580.32 | $2,577.22 |
| University charge (see p. 89) | | |
| Treasurer's Office, care of investments, | $52.93 | |
| Bursar's Office, collections and payments, | 35.84 | |
| Inspector of Grounds and Buildings, salary and expenses, | 28.67 | |
| Watchmen, | 15.63 | |
| Amount deducted above, | 6,580.32 | 6,713.39 |
| | | $9,290.61 |
| Less University charge transferred. | | |
| 20% to University (see p. 95), | $1,342.68 | |
| 80% to College (see p. 122), | 5,370.71 | 6,713.39 |
| | | $2,577.22 |

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## Table No. XX

## PHILLIPS BROOKS HOUSE

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds. | | |
| **Phillips Brooks** House Endowment, | $530.60 | |
| **John W. and Belinda L. Randall,** | 300.98 | |
| **Ralph H. Shepard,** | 572.87 | |
| **Ralph Hamilton Shepard** Memorial, | 325.07 | |
| Gift for present use, | 55.00 | $1,784.52 |

### PAYMENTS

| | | | |
|---|---|---|---|
| Secretary of Phillips Brooks House Association, | | $500.00 | |
| " for the work of Social Settlements, | | 200.00 | |
| Repairs, | | 49.61 | |
| Care and cleaning, | | 1,073.01 | |
| Fuel, | | 203.94 | |
| Water, | | 45.27 | |
| Lighting, | | 105.74 | |
| Furniture, | | 3.73 | |
| Books, | | 46.01 | |
| Insurance, | | 75.11 | |
| Receptions, | | 467.24 | |
| Printing, | | 10.45 | |
| Rent of piano, | | 40.00 | |
| Social Service Investigation, | | 200.00 | |
| Supplies and sundries, | | 200.24 | |
| | | $3,220.35 | |
| Less the following items, formerly paid from University income (see Table I, page 92) : — | | | |
| Repairs and improvements, | $49.61 | | |
| Care and cleaning, | 986.51 | | |
| Fuel, | 203.94 | | |
| Furniture, | 1.53 | | |
| Water, | 45.27 | | |
| Lighting, | 105.74 | | |
| Insurance, | 75.11 | | |
| Supplies and sundries, | 47.60 | 1,515.31 | $1,705.04 |
| University charge (see p. 89). | | | |
| Treasurer's Office, care of investments, | | $35.59 | |
| Bursar's Office, collections and payments, | | 17.50 | |
| Inspector of Grounds and Buildings, salary and expenses, | | 29.77 | |
| Publication Office, salary and expenses, | | 2.38 | |
| Watchmen, | | 16.23 | |
| Total of items deduced above, | | 1,515.31 | 1,616.78 |
| Amount carried forward, | | | $3,321.82 |

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## Table No. XX, Phillips Brooks House, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $3,321.82 |
| Less University charge transferred. | | |
| 10% to University (see Table I, page 95), | $161.78 | |
| Remainder, divided in proportion to the number of students: — | | |
| College (see Table II, page 122), | 1,151.72 | |
| Divinity School (see Table IV, page 129), | 12.48 | |
| Law School (see Table V, page 131), | 290.80 | 1,616.78 |
| | | $1,705.04 |

## Table No. XXI

## HEMENWAY GYMNASIUM

### RECEIPTS

| | | |
|---|---|---|
| Fees for the use of | | |
| Lockers, by students, | $2,188.00 | |
| Gymnasium, by graduates, | 30.00 | $2,218.00 |

### PAYMENTS

| | | |
|---|---|---|
| Salaries, | $5,000.00 | |
| Services and wages, | 1,004.78 | |
| Repairs and improvements, | 560.33 | |
| Care and cleaning, | 2,485.74 | |
| Fuel, | 986.54 | |
| Apparatus, | 350.00 | |
| Furniture, | 13.36 | |
| Insurance, | 239.52 | |
| Water, | 240.11 | |
| Lighting, | 528.51 | |
| Printing, | 39.92 | |
| Stationery and postage, | 101.37 | |
| Telephone, | 56.13 | |
| Supplies and sundries, | 28.22 | $11,634.48 |
| University charge (see p. 89). | | |
| Bursar's Office, collections and payments, | $48.38 | |
| Inspector of Grounds and Buildings, salary and expenses, | 142.13 | |
| Publication Office, salary and expenses, | 9.46 | |
| Watchman, | 77.48 | 277.45 |
| | | $11,911.93 |
| Less amount transferred in proportion to number of students. | | |
| To College (see p. 117), | $7,677.81 | |
| Divinity School (see p. 128), | 83.67 | |
| Law School (see p. 130), | 1,932.45 | 9,693.93 |
| | | $2,218.00 |

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## Table No. XXII

## STILLMAN INFIRMARY

### RECEIPTS

| | | |
|---|---|---|
| Income of Funds and of Gifts. | | |
| **Stillman** Infirmary balance (interest on), | $73.63 | |
| **Robert Charles Billings,** for **Stillman** Infirmary, | 2,911.07 | |
| Free Bed Fund of the **Class of 1868,** | 310.22 | |
| " " for the **Stillman** Infirmary, | 31.41 | |
| **Herbert Schurz** Memorial Free Bed Fund, | 174.68 | |
| **Stillman** Infirmary Gift. Interest on balance, | 340.67 | |
| **Henry P. Walcott,** | 154.03 | $3,995.71 |
| Receipts from Students. | | |
| Infirmary annual fees, | $14,292.00 | |
| Receipts from patients, | 5,596.34 | 19,888.34 |
| | | $23,884.05 |

### PAYMENTS

| | | |
|---|---|---|
| From Free Bed Fund of the **Class of 1868,** | | $76.80 |
| Services and wages, | $7,534.44 | |
| Janitors and cleaning, | 3,355.16 | |
| Repairs and improvements, | 256.11 | |
| Fuel, | 2,040.80 | |
| Water, | 379.07 | |
| Lighting, | 644.06 | |
| Furniture, | 378.03 | |
| Stationery and postage, | 53.94 | |
| Telephone, | 191.11 | |
| Printing, | 26.85 | |
| Electric power, | 2.40 | |
| Food and supplies, | 7,765.75 | |
| Sundries, | 104.80 | 22,732.53 |
| | | $22,809.33 |

| | | |
|---|---|---|
| University charge (see p. 89). | | |
| Treasurer's Office, care of investments, | $95.52 | |
| Bursar's Office, collections and payments, | 232.99 | |
| Medical Adviser, salary and expenses, | 750.00 | |
| Inspector of Grounds and Buildings, salary and expenses, | 40.05 | |
| Publication Office, salary and expenses, | 6.39 | |
| Labor, | 80.40 | 1,205.35 |
| | | $24,014.67 |

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## Table No. XXIII

## SUNDRY FUNDS FOR SPECIAL PURPOSES

### RECEIPTS

| | | |
|---|---|---|
| **Gift for Capital Account.** | | |
| Professorship of Hygiene (1908), | | $20,915.00 |
| **Income of Funds, Gifts, &c.** | | |
| Advancement of Astronomical Science (1901), | $2,528.03 | |
| Advancement of Astronomical Science (1902) (part, see p. 143), | 452.29 | |
| **Daniel A. Buckley** (part), | .80 | |
| **Income of Funds, Gifts, &c.** (*continued*). | | |
| **Bussey Trust** (part, see pp. 126, 129, 139), | 4,025.00 | |
| **Class of 1834,** | 68.82 | |
| " **1844,** | 395.80 | |
| " **1846,** | 603.27 | |
| " **1853,** | 153.66 | |
| " **1856,** | 378.75 | |
| **Caroline Brewer Croft** (part, see p. 133), | 2,204.00 | |
| **Calvin** and **Lucy Ellis** (part, see p. 132), | 93.16 | |
| **George H. Emerson** Scholarship (part, see p. 108), | 179.60 | |
| Gospel Church (½ income, see p. 101), | 179.81 | |
| **Gurney** (part, see p. 101), | 532.60 | |
| **Charles L. Hancock** (part, see p. 126), | 85.36 | |
| **Harvard** Memorial Society, | 76.96 | |
| **Henry S. Nourse** (part, see p. 90), | 1,006.00 | |
| **Robert Troup Paine** (accumulating), | 1,667.60 | |
| Professorship of Hygiene (part, see p. 101), | 4,378.26 | |
| Professorship of Hygiene (1908), | 550.00 | |
| **James Skillen** Memorial, | 548.28 | |
| **George Smith** Bequest (part, see p. 158), | 900.00 | |
| **Stoughton** Scholarship, | 19.59 | |
| **Alexander W. Thayer** (part, see p. 106), | 480.00 | |
| **Charles Wilder,** | 2,022.42 | |
| **Daniel Williams,** | 842.54 | |
| **Sarah Winslow,** | 242.40 | |
| Woodland Hill. Use of laboratory, | 1,166.66 | 25,731.66 |
| | | $46,646.66 |

### PAYMENTS

| | | |
|---|---|---|
| **From the following Funds and Gifts.** | | |
| Advancement of Astronomical Science (1901), annuity, | | $2,395.00 |
| Advancement of Astronomical Science (1902) (part), annuity, | | 773.72 |
| **Daniel A. Buckley,** taxes on real estate, Eden, Me., | | .80 |
| **Bussey Trust,** Annuities (part), | $4,000.00 | |
| Legal expenses, | 25.00 | 4,025.00 |
| **Class of 1844,** | | 49.09 |
| Amount carried forward, | | $7,243.61 |

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## Table No. XXIII, Sundry Funds for Special Purposes, cont'd

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $7,243.61 |
| **Class of 1853,** Secretary of the Class, | | 153.66 |
| " **1856,** " " " | | 385.68 |
| **Caroline Brewer Croft** (part), annuity, | | 2,204.00 |
| **Calvin and Lucy Ellis** (part), taxes, | | 93.16 |
| **George H. Emerson** Scholarship (part, see p. 118), taxes and expenses, | | 179.60 |
| Gifts for Cuban Teachers, expenses, | | 52.00 |
| **Gurney** (part), annuities, | | 532.60 |
| **Charles L. Hancock** (part), taxes on Chelsea real estate, | | 35.36 |
| **Henry S. Nourse** (part). Annuity, | $1,000.00 | |
| Legal and other expenses, | 6.00 | 1,006.00 |
| Professorship of Hygiene (part), annuity, | | 4,378.26 |
| **James Skillen** Memorial, annuity, | | 800.00 |
| **George Smith** Bequest. Annuities, | | 900.00 |
| **Stoughton,** moth tax on real estate, | | 19.59 |
| **Alexander W. Thayer,** annuity, | | 480.00 |
| **Charles Wilder,** annuities, | | 1,916.00 |
| **Daniel Williams.** | | |
| Treasurer of Mashpee Indians, | | 545.53 |
| **Sarah Winslow.** | | |
| Teacher at Tyngsborough, Mass., | $114.73 | |
| Minister " " " | 114.73 | |
| Commission on income, credited to University, | 6.06 | 235.52 |
| Woodland Hill. | | |
| Taxes, | $1,079.89 | |
| Legal expenses, | 404.36 | |
| Interest on advances, | 143.78 | |
| Removing moths and trees | 20.00 | 1,648.03 |
| | | $22,808.60 |

## Table No. XXIV

## CONSTRUCTION ACCOUNTS

### RECEIPTS

| | | |
|---|---|---|
| **Gifts for a new University Library Building.** | | |
| Interest on balance, | $824.41 | |
| **George Smith** Bequest (accumulating) (part, see p. 157), | 15,191.18 | |
| **Medical School Undertaking.** | | |
| From the House of the Good Samaritan, for connection for compressed air from the Pierce Power House at the Medical School | 32.44 | |
| Gift for Pathological Laboratory. Interest, | 292.09 | |
| **Gifts for Improvements and Additions to The Soldier's Field,** | 20,000.00 | $36,340.12 |

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## Table No. XXIV, Construction Accounts, continued

### PAYMENTS

| | | | |
|---|---|---|---|
| **Antitoxin Stable, construction.** | | | |
| Building, | | | $19,772.27 |
| **Calvin and Lucy Ellis Fund.** | | | |
| For construction of roadway in Bar Harbor, Me., | | | 448.13 |
| From gifts towards the addition to **Gore** Hall, construction, | | | 24,608.85 |
| **Langdell** Hall (for the Law Library), construction, | | | 113,356.51 |
| **Medical School Undertaking.** | | | |
| Real Estate. | | | |
| Payment to Brigham Hospital under agreement of March 27, 1907, | $7,019.50 | | |
| Appraisal, | 50.00 | | |
| Interest, | 33.07 | $7,102.57 | |
| Construction. | | | |
| Buildings, | $47,570.18 | | |
| Interest on advances, | 1,492.71 | 49,062.84 | |
| | | $56,165.41 | |
| From Gifts for Pathological Laboratory, | | 264.33 | 56,429.74 |
| **Gifts for Improvements and Additions to The Soldier's Field.** | | | |
| Stadium. Interest on advances, | | | 1,244.11 |
| | | | $215,859.61 |

## Table No. XXV

## SUNDRY ACCOUNTS

### RECEIPTS

| | | | |
|---|---|---|---|
| **Bursar's Sundry Accounts,** | | | $520,460.74 |
| **Advances from General Investments to** | | | |
| Annals of Mathematics, | | $787.57 | |
| **Uriah A. Boyden Fund,** | | 1,576.28 | |
| Gifts for Chinese Students, | | 2,393.00 | |
| Classical Library Fund, | | 133.48 | |
| Classical Publication Fund of the **Class of 1856,** | | 554.39 | |
| Gift for furnishing **Emerson** Hall, | | 19.27 | |
| Geographical Department (Models), | | 5.23 | |
| **Price Greenleaf** Income for Books, | | 231.58 | |
| **Harvard** Economic Studies, | | 1,708.73 | |
| Political Economy Department Library (Gifts), | | 13.53 | |
| **Shapleigh** Book Fund, | | 26.59 | |
| **Stillman** Infirmary, | | 2,517.86 | 9,967.51 |
| **Gains and Losses for General Investments. Gain on sales.** | | | |
| $100,000 Missouri Pacific Railway Co. 5's of 1908, | | $500.00 | |
| Gain on purchase and sale of $55,000 New York City 4½% Assessment Bonds and Corporate Stock, | | 37.77 | 537.77 |
| Amount carried forward, | | | $530,966.02 |

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## TABLE NO. XXV, SUNDRY ACCOUNTS, CONTINUED

### RECEIPTS

| | | |
|---|---|---|
| Amount brought forward, | | $530,966.02 |
| Gains from changes of Special Investments. | | |
| **Charles L. Hancock** Bequest. | | |
| Gain on sale of real estate in Chelsea, | | 25.00 |
| Income Account. | | |
| Balance remaining after dividing the net income among the Funds, as stated on page 6, | | 535.27 |
| Transfers to the Medical School Undertaking to meet the excess in costs over gifts and other credits. | | |
| From **Henry L. Pierce** (Residuary) Fund, to | | |
| **Collis P. Huntington** Laboratory, | $447.08 | |
| **Junius Spencer Morgan** Memorial Halls, | 6,941.49 | |
| **Pierce** Power House, | 1,410.55 | |
| **David Sears** Building, | 484.76 | |
| Automobile Shelter, | 9,780.28 | |
| Animal House, mains, tunnels and sundries, | 30,016.24 | 49,030.40 |
| Transfers to | | |
| Antitoxin Stable, from **Bussey** Institution, | | 20,177.16 |
| Gifts toward the addition to **Gore** Hall, from | | |
| Gifts for a New University Library Building, | | 24,240.47 |
| Observatory, from | | |
| Fund for Advancement of Astronomical Science (1902), | | 4,089.39 |
| German Professorship Fund (returned during the year to the givers). | | |
| Gifts, | $150.00 | |
| Interest, | 19.99 | 169.99 |
| Sundry balances, | | 3,422.30 |
| | | $632,656.00 |

### PAYMENTS

| | | |
|---|---|---|
| Bursar's Sundry Accounts, | | $518,769.80 |
| Advances from General Investments, repaid by | | |
| Antitoxin Stable, | $404.89 | |
| Botanic Department, | 732.90 | |
| Dante Prize, | 50.00 | |
| Dental School Real Estate, | 87.58 | |
| **Harvard** Psychological Review, | 514.46 | |
| Medical School, | 3,743.55 | |
| Observatory, | 1,024.63 | |
| **Peabody** Museum of American Archaeology and Ethnology, | 1,782.87 | |
| **Sales** Book Fund, | 5.53 | |
| **Sever** Book Fund, | 86.38 | |
| Gifts for Improvements and Additions to The Soldier's Field, on account of the Stadium, | 18,755.89 | 27,188.68 |
| Amount carried forward, | | $545,958.48 |

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## Table No. XXV, Sundry Accounts, continued

### PAYMENTS

| | | |
|---|---|---|
| Amount brought forward, | | $545,958.48 |
| German Professorship Fund returned to the givers, with interest. | | |
| Gifts, | $500.00 | |
| Interest, | 19.99 | 519.99 |
| Gains and Losses for General Investments. Loss on sale. | | |
| $107,000 Third Ave. R. R. Co. of New York, 1st Consolidated Mortgage 4's of 2000, | | 86,928.55 |
| Loss from change of Special Investment. | | |
| **Sarah E. Potter** Fund. | | |
| Loss on sales. | | |
| $25,000 Massachusetts 3½'s of 1936, | $31.25 | |
| $25,000 Lake Shore & Mich. So. 3½'s of 1997, | 31.25 | |
| $16,000 Norfolk & Western R.R. Co. 6's of 1932, | 22.00 | |
| 150 shares West End St. Ry. Pref'd, | 18.75 | |
| Loss on exchange. | | |
| 33 shares in old Pureoxia Co. exchanged for 12 shares in new company, | 102.00 | 205.25 |
| Income Account. | | |
| Balance of income undivided last year and added to this year's income for division among the Funds, | | 1,099.17 |
| Transfers from | | |
| **Bussey** Institution. | | |
| To Antitoxin Stable, | | 20,177.16 |
| Gifts for a new University Library Building. | | |
| To gifts toward the addition to **Gore** Hall, | | 24,240.47 |
| **Henry L. Pierce** (Residuary) Fund. | | |
| To Medical School Undertaking, | | 49,080.40 |
| Fund for Advancement of Astronomical Science (1902). | | |
| To Observatory, | | 4,089.39 |
| Current income of the College. | | |
| To nine Funds re-established (see p. 8), | | 9,746.77 |
| | | $691,995.68 |

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## BALANCED SUMMARY OF THE TABLES

| Table. | | Receipts. | Payments. |
|---|---|---|---|
| I. | University, | $85,726.58 | $61,552.60 |
| II. | College, | 1,412,149.85 | 1,059,717.38 |
| III. | Library, | 67,339.19 | 82,865.53 |
| IV. | Divinity School, | 44,334.26 | 44,304.73 |
| V. | Law School, | 142,140.88 | 120,174.83 |
| VI. | Medical School, | 273,339.28 | 230,527.46 |
| VII. | Dental School, | 52,775.71 | 21,645.65 |
| VIII. | **Bussey** Institution, | 27,895.56 | 20,128.78 |
| IX. | **Arnold** Arboretum, | 31,424.43 | 34,718.18 |
| X. | Botanic Garden and Botanical Museum, | 9,924.52 | 9,285.25 |
| XI. | **Gray** Herbarium, | 153,610.32 | 12,660.57 |
| XII. | Observatory, | 59,230.93 | 63,461.38 |
| XIII. | Museum of Comparative Zoölogy, | 42,446.12 | 40,860.20 |
| XIV. | **Peabody** Museum of American Archaeology and Ethnology, | 19,860.08 | 18,364.01 |
| XV. | Semitic Museum, | 1,439.23 | 13,289.71 |
| XVI. | Germanic Museum, | 1,885.62 | 1,428.15 |
| XVII. | **William Hayes Fogg** Art Museum, | 6,322.02 | 5,875.08 |
| XVIII. | **Jefferson** Physical Laboratory, | 8,999.93 | 6,316.32 |
| XIX. | **Appleton** Chapel, | 2,577.22 | 2,577.22 |
| XX. | **Phillips Brooks** House, | 1,784.52 | 1,705.04 |
| XXI. | **Hemenway** Gymnasium, | 2,218.00 | 2,218.00 |
| XXII. | **Stillman** Infirmary, | 23,884.05 | 24,014.67 |
| XXIII. | Sundry Funds for Special Purposes, | 46,646.66 | 22,808.60 |
| XXIV. | Construction Accounts, | 36,340.12 | 215,859.61 |
| XXV. | Sundry Accounts, | 632,656.00 | 691,995.63 |
| | | $3,186,951.08 | $2,808,354.58 |

| | | |
|---|---|---|
| Total amount of payments, | | $2,808,354.58 |
| Total amount of receipts, | $3,186,951.08 | |
| Less gifts for capital account, | 449,822.53 | 2,737,128.55 |
| Balance, which is the net decrease of Funds and balances, excluding gifts for capital, as is shown also on page 11, | | $71,226.03 |

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*Certificate of the Committees of the Corporation and Overseers of Harvard College, for examining the Accounts of the Treasurer*

The committees appointed by the Corporation and Overseers of Harvard College to examine the accounts of the Treasurer for the year ending July 31, 1908, have, with the assistance of an expert chosen by them, examined and audited the Cash-book and Journal covering the period from August 1, 1907, to July 31, 1908, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were on hand at the beginning of said year, or have been received by him during said year, are now in his possession, or are fully accounted for by entries made therein; they have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

They have in like manner satisfied themselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them as are not supported by counter entries being proved by regular vouchers and receipts.

They have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and the balances carried forward correctly to new accounts.

(Signed)

THOMAS N. PERKINS. } *Of the Committee on the part of the Corporation.*

STEPHEN M. WELD,
WILLIAM ENDICOTT, Jr.
WILLIAM C. ENDICOTT,
GRAFTON St.L. ABBOTT,
ALLAN FORBES,
ARTHUR LYMAN,
JOHN L. SALTONSTALL. } *Of the Committee on the part of the Board of Overseers.*

Boston, January, 1909.

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# INDEX

Titles which appear in the table of Funds and Balances, beginning on page 62, are in full face type.

Figures in *italics* represent payments; in regular Roman type, receipts.

Two or more entries on a page are indicated by a small figure at the right of the page number: $20^3$ indicates three entries of receipts on page 20.

Abbreviations are used as follows: —

| | | | |
|---|---|---|---|
| *A.*, | Arnold Arboretum; | *M.*, | Medical School; |
| *B.*, | Book Funds; | *M.S.U.*, | Medical School Undertaking; |
| *Be.*, | Beneficiary and Loan Funds; | *O.*, | Observatory; |
| *C.*, | College; | *P.*, | Professorship Funds; |
| *D.*, | Divinity School; | *Pr.*, | Prize Funds; |
| *F.*, | Fellowship Funds; | *S.*, | Scholarship Funds; |
| *L.*, | Law School; | *U.*, | University. |


**Abbot** (*S.*), 75, 103, *112*.
**Abbot, J. W. P.**, 72, 102.
**Advancement of Astronomical Science** (1901), *53*, 85, 157, *157*.
**Advancement of Astronomical Science** (1902), *53*, 68, 85, 143, *144*, 157, *157*.
Advances from General Investments, 159, *160*.
**Agassiz Memorial**, 82, 145.
**Alford** (*P.*), 72, 100.
**Alford** (*S.*), 75, 103.
**Ames, J. B.** (Loan), 81, 129.
**Ames, J. B.** (*Pr.*), 68, 81, 129.
**Ames, O.**, 80, 126.
**Ames, R. C.** (*Be.*), 77, 105, *115*.
**Anatomical Research**, 84, *135*.
**Andrews, H. C.**, 80, 126.
Annuities, *53*, *157*, *158*.
**Anonymous** (*F.*), 84.
Anonymous (*O.*), 143.
**Anonymous** (*Pr.*), 28.
**Anonymous** (*S.*), 28.
**Anonymous Aid** (*Be.*), $28^3$, 85, *115*, 132, *134*.
Antitoxin Laboratory, *53*, 91, *159*, *160*.
Appleton Chapel, *41*, *51*, *92*, 162.
Tables, 21, 153, *153*.
**Appleton, J. A.** (*F.*), 75, 102, *111*.
**Appleton, N.** (*Be.*), 77, 105.
**Appleton, T. G.**, 85, 143.
Appropriations, *43*, *45*, *118*, *119*, *135*, *136*.
**Arboretum Construction**, 32, 86, 140.
Archaeology, Central American (*F.*), 38, 75, 146, *147*.
**Architecture**, 32, 52, 74, 108, *117*.
Architectural League (*S.*), *114*.
**Arnold Arboretum**, $23^7$, 54, 86, $140^2$.
Arnold Arboretum, $32^3$, *45*, 162.
**China, Expedition to**, $32^4$, 86.
**Funds**, 86.
Tables, 16, 140, *140*.
**Arnold Arboretum, Books**, 32, *45*, 86.
**Arnold, J.**, 86, 140.
**Austin, D.** (*C.*), 72, 123.
**Austin, D.** (*D.*), 80, 126.
**Austin, E.**, 87, $102^2$, $103^2$, $111^2$, $112^2$, $115^2$, 132, *134*.
**Austin, E.** (Bacteriological Laboratory), 83, 133, *135*.
**Austin, E.**, Loans Rep'd (*Be.*), 81, 105, 106.
**Ayer, A.**, 80, 126.

**Bacteriological Laboratory**, 83, 133, *135*.
**Baker, J.**, 80, 126.
Balance (Remainder) of Income, General Investments, 6, 160.
**Baldwin, W. H. Jr.** (*U.*), 71, 102.
**Baldwin, W. H. Jr.** 1885, 72, 107.
**Band Music**, 71, 90.
**Barnard, John** (*C.*), 72, 100.
**Barnard, J. M. and A.** (*L.*), 81, 129.
**Barringer, E. M.**, 26, 54, 83, $131^2$, 132, *134*.
**Barringer, J. B.**, 81, 100.
**Bartlett** (*S.*), 75, 103, *112*.
**Bassett** (*S.*), 75, 103, *112*.
**Belknap, J.** (*Pr.*), 28, 107, *115*.
**Bemis** (*P.*), 81, 129.




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Beneficiary and Loan Funds, 77, 78.
Receipts, 105, 106, 107.
Payments, 7, *41*, *115*, *128*.
Beneficiary Money Returned (*D.*), 80, 126.
Bennett, J. G. (*Pr.*), 78, 107.
Bennett, P. S. (*Pr.*), 78, 107, *115*.
Bermuda Biological Station, 32, 74, 108, *117*, *145*.
Bigelow (*S.*), 75, 103, *112*.
Bigelow, A., 71, 90.
Billings, L. F. (*S.*), 85, 132, *134*.
Billings, R. C. (*A.*), 69, 86, 140.
Billings, R. C. (Gray Herbarium), 72, 142.
Billings, R. C. (*M.*), 83, 132, *135*.
Billings, R. C. (*Pr.*), 81, 127, *128*.
Billings, R. C. (Stillman Infirmary), 87, 156.
Biological Chemistry, 35, 84.
Blake, S., 71, 90.
Blanchard, C. F., 71, 90.
Blanchard, J. A., 72, 102.
Bolles, F., Memorial (*Be.*), 77, 106, *115*.
Bond Gifts (*O.*), 86.
Book Fund of the Class of 1881, 79.
Books Lost, 128, *125*.
Boott, F. (*Pr.*), 78, 79, 107[2], *115*, *116*.
Borden (*S.*), 75, 103.
Boston Newsboys' (*S.*), 25, 29, 54, 77, 100, 104, *113*.
Botanic Department, 72, 107, 141, *160*.
Botanic Garden, Cases, 74, 141.
Botanic Garden Centennial, 72, 141.
Botanic Garden and Botanical Museum, 33[4], *45*, 72, 73, 162.
Tables, 17, 141, *141*.
Bowditch (*S.*), 75, 103, *112*.
Bowditch, J. I. (*M.*), 83, 133, *135*.
Bowditch, J. I. (*O.*), 85, 143.
Bowditch, N. I. (*B.*), 79, 122, *124*.
Bowdoin (*Pr.*), 78, 107, *115*.
Boyden, U. A., 64, 85, 143, *144*, 159.
Boylston (*P.*), 72, 100.
Boylston, Elocution (*Pr.*), 78, 107, *115*.
Boylston, W. N. (*M.*, *B.*), 83, 133.
Boylston, W. N. (*M.*, *Pr.*), 85, 133, *135*.
Bradford, S. D., 71, 90.
Bradley, W. L., 32, 86, 140, *140*.
Brattle, W. (*Be.*), 77, 106.
Bright (*B.*), 79, 122, *124*.
Bright (*S.*), 75, 103, *112*.
Bright Legacy, 87, 103, 122.
Brighton Marsh Fence, 87.
Brimmer, 71, 100.
Brooks House, Phillips, 86, *92*, 154, *154*.
Brooks House, Phillips, *41*, *51*, 162.
Funds, 86.
Tables, 21, 154, *154*.
Brown, J. B. and B., 83, 132.
Browne (*S.*), 75, 103, *112*.
Buckley, D. A. (*Be.*), *53*, 66, 77, 106, *112*, 157, *157*.
Buckminster, M. W. (*S.*), 76, 103, *112*.
Building, Gifts for (Dental School), 87[24], 85, 137.
Bullard Professorship of Neuropathology, 83, 132, *135*.
Burr (*S.*), 76, 103, *112*.
Burr, R. D. (*B.*), 80, 127, *128*.
Bursar's Sundry Accounts, 58, *59*, 87, 159, *160*.
Bussey (*A.*), 86, 140.
Bussey (*P.*, *D.*), 80, 126.
Bussey, B. (*P.*, *L.*), 81, 129.
Bussey, B., Trust, *53*, 56, 60, 64, 69, 87, 126, 129, 139, 157, *157*.
Bussey Institution, 86, 139.
Bussey Institution, 32, *45*, 52, 162.
Funds, 86.
Tables, 16, 139, *139*.
Buttrick, A. W. (*Be.*), 81, 127, *128*.

Cabot, J. J. (*S.*), 85, 133, *134*.
Cabot, W. C., 78, 106, *115*.
Carnegie Foundation for the Advancement of Teaching, 27, 90, *92*, *94*.
Carnegie Nutrition Laboratory, 52, 134.
Carter, J. C. (*U.*), 71, 90.
Carter, J. C. (*P.*, *L.*), 81, 129.
Carter, J. C., Loan (*L.*), 81, 129.
Carter, J. W., 65, 71, 90.
Cary, T. (*S.*), 81, 127, *127*.
Castle, W. R. (*B.*), 68, 79, 122, *124*.
Centennial, for the Botanic Garden, 72, 141.
Cercle Français de l'Université Harvard (*F.*), 29, 102, *112*.
Certificate, Committees to examine the Treasurer's Accounts, 163.
Changes in the Funds, Table, 11.
Chapman, G. (*S.*), 81, 127, *127*.

Digitized by Google

Cheever, D. W. (*S.*), 85, 133, *134*.
Child, F. J. (Memorial), 72, 107, *116*.
China, Gifts for Expedition to, 32[4], 86, 140, *140*.
Chinese Students, Gifts for, 88, *117*, 159.
Choate, R. S. (*S.*), 76, 103, *112*.
Clapp, J., 80, 126.
Clapp, J. (*S.*), 81, 127, *127*.
Clark, George Newhall (*S.*), 25, 54, 55, 66, 76, 100, 103.
Class of 1802 (*S.*), 76, 103, *112*.
Class of 1814 (*S.*), 76, 103, *112*.
Class of 1815, Kirkland (*S.*), 76, 103, *112*.
Class of 1817 (*S.*), 76, 103, *112*.
Class of 1828 (*S.*), 76, 103, *112*.
Class of 1834, 69, 87, 157.
Class of 1835 (*S.*), 76, 103, *112*.
Class of 1841 (*S.*), 76, 103, *113*.
Class of 1842, 23, 54, 87, 100, 102.
Class of 1844, *53*, 69, 87, 157, *157*.
Class of 1846, 87, 157.
Class of 1851, 79, 124.
Class of 1851 (C. F. Dunbar), 79, 124.
Class of 1852, Dana (*S.*), 76, 103, *113*.
Class of 1853, *53*, 69, 87, 157, *158*.
Class of 1856, *53*, 87, 157, *158*.
Class of 1856 (*S.*), 76, 103, *113*.
Class of 1867 (*S.*), 76, 103, *113*.
Class of 1868, Free Bed, 87, 156.
Class of 1877 (*S.*), 76, 103, *113*.
Class of 1880, 72, 100.
Class of 1881 (*B.*), 79, 107, *116*.
Class of 1881, Twenty-fifth Anniversary Fund, 23, 54, 74, 100, 102.
Class of 1882, 23, 54, 72, 100, 102.
Class of 1883 (*S.*), 76, 103, *113*.
Class of 1883 (*C.*), 23, 54, 72, 100, 102.
Class of 1883, Special Fund, 23, 54, 72, 100, 107.
Class Subscription, 72, 100.
Classical Library, 74, 108, *117*, 159.
Classical Publication Fund of the Class of 1856, 64, 72, 107, *116*, 159.
Codman, E. W., 66, 72, 102.
Coggan, John, 72, 100.
College, 6, *41*, 162.
  Funds, 72–79.
  Tables, 12, 100, *112*.
Committee on the Publication of Academic Distinctions, *121*.
Comparative Medicine, School of, 84, 133.
Conant, E. (*D.*), 80, 126.
Conant, E. (Library), 79, 123, *124*.
Constantius, 79, 123, 124, *124*.
Construction Accounts, *53*, 162.
  Table, 158, *159*, 162.
Construction Gifts (balances), 87.
Coolidge, Debating (*Pr.*), 78, 107, *115*.
Coolidge, E. E., 66, 71, 90, 106, *115*.
Coolidge, T. J., 66, 72, 151, *152*.
Cotting Gift (*Be.*), 85, 133, *134*.
Cotton, T., 71, 90, *94*.
Cowdin, J., 71, 90.
Croft, C. B., 86[2], *53*, 83, 133, *135*, 157, *158*.
Crowninshield (*S.*), 76, 103, *113*.
Cryptogamic Herbarium, 72, 107.
Cuban Teachers, Gifts for, *53*, 88, *158*.
Cudworth, W. H. (*S.*), 29, 76, 103, *113*.
Cummings, F. H. (*S.*), 76, 103.

Dana, Class of 1852 (*S.*), 76, 103, *113*.
Dane (*P.*), 81, 129.
Danforth, T. (*Be.*), 78, 106.
Dante (*Pr.*), 28, 78, 107, *115*, *160*.
Day, M. (*Be.*), 78, 106, *115*.
Delano, W. Jr., Loan (*S.*), 82, *115*.
Denny (*B.*), 79, 123, *124*.
Dental School, 37, *45*, 162.
  Funds, 85.
  Tables, 15, 137, *138*.
Dental School (balance), 85, 137.
Dental School, Building, 37[24], 85.
Dental School Endowment, 85, 137.
Dental School Real Estate (balance), 85, 137, *138*, *160*.
Derby, G. and M. (*S.*), 76, 103, *113*.
Dexter, J. (*S.*), 76, 103, *113*.
Dexter Lectureship, 80, 126.
Dillaway, G. W. (*F.*), 75, 102, *112*.
Disbursements and Receipts, General Statement, 54.
Divinity School, *43*, 162.
  Funds, 80, 81.
  Library, 31, 127.
  Tables, 14, 126, *127*.
Divinity School (balance), 80, 126.
Doe, O. W. (*C.*, *S.*), 76, 103, *113*.
Doe, O. W. (*M.*, *S.*), 85, 133, *134*.

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Dormitories:
College, *41*, 50, 110, *120*.
Divinity School, 50.
Dorr, G. B., 65, 71, 90.
Draper, G., 65, 71, 90.
Draper Memorial, 37, 85, 143, *144*.
Dudley, P., 72, 100.
Dunbar, C. F. (Class of 1851), 79, 124.

Eaton (*P.*), 72, 100.
Economics, *117*.
Eddy, R. H., 65, 71, 90.
Education, Department of (*S.*), 76.
Eliot (*P.*), 72, 100.
Eliot, Jon. Phillips' Gift (*P.*), 66, 72, 100.
Eliot, W. S. (*S.*), 76, 103, *113*.
Ellery, J. (*Be.*), 78, 106.
Ellis, C. and L., *53*, *55*, *64*, 68, 83, 132, 157, *158*, *159*.
Ellis, C. and L. (Aid), 69, 87, 100, 106, *115*, 157, *158*.
Ellis, H., 71, 90.
Emerson, G. H. (*S.*), 52, *53*, 81, 103, *113*, 157, *158*.
Emerson Hall (Furnishing), 75, *117*, 159.
Emerson Hall (Furnishings, Social Ethics), 75, 109, *117*.
Emperor William, 24, 54, 82, 149[2].
Engineering (Electrical Apparatus), 75.
Engineering (*P.*), 82, 101.
Erving (*P.*), 72, 101.
Ethics, Social, 109, *117*.
Eveleth, J. (*S.*), 76, 104, *113*, 133, *134*.
Exhibitions (*Be.*), *43*, 78, 106, *115*.
Expenses and Income (General Statement), 40.

Fabyan, G., Foundation for Comparative Pathology, 83, 132, 133, *135*.
Fall River (*S.*), 76, 104, *113*.
Farrar, E. (*B.*), 79, 123, *124*.
Farrar (*S.*), 76, 104, *113*.
Fay, S. P. P. (1798) (*S.*), 81, 129.
Fees:
Examination, 48[5], 110[2], 134, 137.
Graduation, 48[2], 110, 134.
Hemenway Gymnasium, 50, 52, 155.
Infirmary (Dental School), 52, 137.
Laboratory, 48[4], 110, 134[6], 137, 141.
Library, 52, 124.
Matriculation, 48, 134.
Microscopes, 50, 134, 137.
Repaid to Instructors, *43*, *136*.
Stillman Infirmary, 50, 156.
Tuition, 50[4], 48[7], 109, 127[2], 130, 134[4], 137[3], 139.

Fellowships:
Funds, 75, 84.
Receipts, 28, 29[6], 102, 103, 132, 146.
Payments, 7, *41*, *43*, *111*, *112*, *134*, *147*.
Fines (*B.*), 50, 124, *125*, 127.
Fisher (*P.*), 72, 101.
Fisher, G. (*S.*), 81, 129, *130*.
Fitch, T. (*Be.*), 78, 106.
Fitz, S. E., 83, 132.
Flynt, E. (*Be.*), 78, 106.
Flynt, H. (*Be.*), 78, 106.
Flynt, H. (for Tutors), 72, 101.
Fogg Art Museum, *41*, *49*, 162.
Funds, 86.
Tables, 20, 150, *150*.
Fogg Art Museum (balance), 86, *150*.
Fogg, W. H., 86, *92*, 150.
Folsom Memorial, Charles Follen (*F.*), 26, 35, 54, 84, 131, 132.
Forestry, Division of, 32[5], 33, 75, 108, *117*.
Foster, J. (*Be.*), 85, 87, 133, *135*.
Foster, R. W., 71, 90.
Free Bed Fund of the Class of 1868, 87, 156.
Free Bed Fund for Stillman Infirmary, 87, 156.
French, J. D. W., 65, 71, 90.
French, Library, *117*.
Frothingham (*P.*), 80, 126.
Fuller, A. W., 80, 126.
Funds and Balances, Table, 71.
Funds in trust for purposes not connected with the College, 88, 91.
Fund for Permanent Tutors, 72, 101.
Fund for Religious Services, 72, 153.
Funds:
Composite, 9.
Re-established, 8, 100.

Gains from changes of investments:
General, 6, 159.
Special, 7, 160.

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**Gains and Losses for General Investments**, 6, 7, 87, 159, *161*.
**Gambrill, R. A.** (*S.*), 76, 104, *113*.
**Gardner, G. A.**, 81, 107, *116*.
**Garrison, L. McK.** (*Pr.*), 78, 107, *115*.
**German Professorship** (*C.*), 24[2], 54, *59*, 72, *162*.
Germanic Museum, 34[3], *49*, 162.
Funds, 82, 149[2].
Tables, 20, 149, *149*.
**Germanic Museum** (balance), 82.
**Germanic Museum Building**, 82, 149[2].
**Germanic Museum** (Collections), 74.
**Gibbs, H.** (*Be.*), 78, 106.
**Gibbs, V. B.** (*S.*), 82, 145, *145*.
Gifts received for
Funds (capital), 11, 23–26.
Immediate use, 27–38.
**Glover, J.** (*Be.*), 78, 106.
**Godkin Lecture**, 72, 101.
**Goodwin, C. H.** (*S.*), 76, 104, *113*.
**Goodwin, O.**, Memorial (*F.*), 75, 102, *112*.
**Gore**, 71, 90.
Gore Hall, Addition to, *53*, *159*, 160.
**Gospel Church**, 72, 101, 157.
**Gould, L.**, 80, 126.
Graduate School of Applied Science, Funds, 82.
Graduate School of Applied Science (*S.*), *114*.
Graduate School of Business Administration, 31[3], 82, 109, *117*.
**Gray** (Engravings), 86, 150, *150*.
Gray, A. (Copyrights), 52, 142.
**Gray, A.** (Memorial), 25, 54, 72, 142[2].
**Gray, A.** (*P.*), 72, 101.
Gray Herbarium, 24, 33[71], 34[55], *47*, 142, 162.
Tables, 17, 142, *142*.
**Gray Herbarium** (balance), 72, 142.
**Gray, J. C.**, 65, 71, 90.
**Gray**, Zoölogical Museum, 82, 145.
**Greene, B. D.** (*S.*), 76, 104, *113*.
**Greenleaf, P.**, *55*, 56, 70, 87.
**Greenleaf, P.** (Aid) (*Be.*), 78, 106, *115*.
**Greenleaf, P.** (*B.*), 123, 124, *124*, 159.
**Greenleaf, P.** (*S.*), 76, 104, *113*.
**Greenough, F. B.**, 83, 133.
**Gurney**, *53*, 72, 101, 157, *158*.
Gymnasium, see Hemenway.
**Hale, G. S. and E. S.**, 73, 107.
**Hall, L. J.**, 80, 127, *128*.
**Hancock, C. L.**, *53*, 56, 69, 80, 126, 157, *158*, 160.
**Hancock, J.** (*P.*), 80, 126, 160.
**Harlow, E. A. W.** (*Be.*), 78, 106, *115*.
**Harris** (*F.*), 75, 102, *112*.
**Harris, C.**, 85, 143.
**Harris, H.**, 87, 90, 132.
Harvard Club of Buffalo (*S.*), *113*.
Harvard Club of Chicago (*S.*), 29, 104, *113*.
Harvard Club of Cleveland (*S.*), 29, 104, *113*.
Harvard Club of St. Louis (*S.*), 29, 104, *113*.
Harvard Club of San Francisco (*S.*), 29, 104, *113*.
**Harvard Dental Alumni**, 85, 137.
Harvard Dining Association, *55*, 58, *59*, 64.
Harvard Economic Studies, 111, *116*, 159.
**Harvard Engineering Society of New York** (*Be.*), 29, 78, 107.
**Harvard Medical Alumni**, 25, 54, 83, 131[2].
**Harvard Medical Alumni Gifts**, 83.
**Harvard Memorial Society**, 87, 157.
Harvard Menorah Society (*Pr.*), 28, 107, *115*.
Harvard Psychological Studies, 111, *160*.
**Harvard Oriental Series**, 73, 108, *116*.
**Hastings, W.**, 65, 71, 90.
**Haven** (*D.*), 80, 126.
**Haven** (*O.*), 85, 143.
**Haven, H. A.** (*B.*), 79, 123, *124*.
**Haven, J. A.** (*S.*), 76, 104, *113*.
**Hayden, L. and H.** (*S.*), 85, 133, *135*.
**Hayes, F. B.** (*B.*), 79, 123, *124*.
**Hayward, G.** (*B.*), 79, 123, *124*.
**Hayward, J.**, 86, 143.
Heating Plant, Use of, 147.
**Hemenway** (*F.*), 83, 146, *147*.
Hemenway Gymnasium, *41*, *51*, *117*, 162.
Tables, 22, 155, *155*.
**Herbarium**, 73, 142, *142*, *143*.
**Hersey** (*P.*), 73, 101, 132.
**Hersey**, Thomas Lee's Gift (*P.*), 73, 101.
**Higginson, G.** (*P.*), 83, 132.

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**Higginson, H. L.**, 71, 90.
**Hilton, W.** (*S.*), 76, 104, *113*, 133, *135*.
**Hoar, E. R.** (*S.*), 76, 104, *113*.
**Hoar, L.** (*S.*), 76, 104, *113*.
**Hoar, S.**, 80, 126.
**Hodges** (*S.*), 76, 104, *113*.
**Hodges, P. C.** (*S.*), 25, 54, 76, 100, 104.
**Hodges, R. M.** (Library), 79, 123.
**Hollis** (*S.*), 76, 104, *113*.
**Hollis**, Divinity (*P.*), 73, 101.
**Hollis**, Mathematics (*P.*), 73, 101.
**Hollis, T.** (*B.*), 79, 123, *124*.
**Hollis, Thomas** (for Treasurer), 73, 100.
**Holyoke, E.** (*Be.*), 78, 106.
**Homans Memorial** (*P.*), 26, 54, 83, 131, 132.
**Homer, S.** (*B.*), 79, 123, *124*.
**Hooper, E. W.** (*F.*), 75, 102, *112*.
**Hooper, S.** (*P.*), *47*, 82, 145, *145*.
**Hopkins, E.** (*Pr.*), 52, 78, 107, *115*.
Horticultural Department, 139, *139*.
House of the Good Samaritan, 52, 134, 158.
Houses, Use of, 91, 139, 141, 144.
**Hubbard, T.**, 73, 100.
**Hughes Loan**, 81, 129, *130*.
**Hulton, N.**, 73, 100.
**Humboldt**, 82, 145.
**Humphrey, H. B.** (*S.*), 76, 104, *113*.
**Hunnewell, W. P.**, 82, 145.
**Hutchinson, T.**, 73, 100.
**Hyde, G. B.**, 71, 90.
**Hygiene** (*P.*), 24, 52, *53*, 54, 55, 66, 74, 101, 157, *158*.

Income,
  Rate of dividing, 6.
  Remainder, 6.
  Table, 40.
Infirmary, Stillman, 156, *156*.
**Ingersoll Lecture**, 73, 101.
Insurance Awards, 52, 111, 139, 143, 144.
**Insurance and Guaranty**, 65, 71.
Interest on tuition-fees paid in advance, 111, 127, 130, 132, 137, 139.
Investments held July 31, 1907,
  General, 10, 55, 60–64.
  Special, 10, 55, 60, 65–70.

**Jackson Foundation** (*S.*), 81, 127, *127*.
**Jackson, H., Endowment**, 84, 132.
**Jackson Professorship of Clinical Medicine**, 84, 132.
**Jarvis** (*B.*), 79, 123, *124*.
**Jarvis, L.**, 71, 90.
Jefferson Physical Laboratory, *41*, *49*, *117*, 162.
  Tables, 20, 151, *152*.
**Jefferson Physical Laboratory** (balance), 73, 151.
**Jennings, H.** (*S.*), 81, 104.
**Jones, C. L.** (*S.*), 76, 104, *113*.
**Jones, C. M.** (*S.*), 85, 133, *135*.

**Keayne, R.** (*Be.*), 78, 106.
**Kendall, J. H.** (*S.*), 81, 127, *127*.
**Kendall, N.** (*S.*), 81, 127, *127*.
**Kidder, H. P.** (*D.*), 80, 126.
**Kidder, H. P.** (*U.*) 71, 90.
**Kimball, B.** (*Be.*), 78, 106, *115*.
**Kirkland**, Class of 1815 (*S.*), 76, 103, *113*.
**Kirkland, J. T.** (*F.*), 75, 102, *112*.
Labrador, Expedition to, *143*.

Land, Use of, 91.
Landscape Architecture, *118*.
**Langdell Hall** (Construction), *53*, *159*.
**Lane, F. A.** (*B.*), 79, 123, *124*.
Law School, *43*, 162.
  Funds, 81.
  Tables, 14, 129, *130*.
**Law School** (*B.*), 81, 129.
**Law School** (balance), 81, 129.
**Law School Library**, 81, 129.
**Lawrence, A.**, 82, 101.
**Lawrence, J.**, 82, 101.
**Lawrence Scientific School Association** (*S.*), 82.
Lawrence Scientific School Funds, 81, 82.
**Lawrence Scientific School, Loans Repaid**, 82, 106, *115*.
**Lecompte, W. A.** (*P.*), 84, 132, *135*.
Lectures, $27^{6}$, 31, 73.
**Lee, H.** (*P.*), 73, 101.
**Lee, H.**, Memorial (*F.*), 75, 102, *112*.
**Lee, J.**, 65, 71, 90.
**Lee, T.** (*Hersey P.*), see Hersey.
**Lee, T.** (Reading), 73, 101.
Library, 25, $30^{24}$, $31^{15}$, *43*, 162.
  Funds, 79, 80.
  Tables, 13, 122, 123, 124, *125*.
**Library Building**, 87, 158.

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**Lienow, H.**, 80, 126.
**Lindall, M.** (*Be.*), 78, 106.
**Linder, A. H.** (*S.*), 85, 133, *135*.
**Locke, Henry Weidemann** (*S.*), 29, 82, 104.
Losses from change of investments.
General, 6, *161*.
Special, *7*, *161*.
**Lovering, J.**, 73, 151, *152*.
**Lowell** (*B.*), 79, 123, *124*.
**Lowell** (Botanic Garden), 73, 141.
**Lowell, G. E.** (*S.*), 76, 104, *113*.
**Lowell, H. N.**, 36, 84, 133.
**Lunar Photographs** (Publishing), 86.
**Lyman, A. T.**, 23, 54, *57*, 66, 73, 100, 101.
**Lyman, S. B.** (*Be.*), 78, 106.
**Lyman, S. B.** (Loan), 78.
**Lyman, S. B.** (Loan, L. S. S.), 82.
**Lyman, T.**, 71, 90.

**McLean** (*P.*), 73, 101.
**Markoe** (*S.*), 76, 104, *113*.
**Matthews** (*S.*), 76, 104, *113*.
**Medical Library**, 84, 133.
Medical School, 36, *43*, 162.
Funds, 83, 84, 85.
Real Estate, *159*.
Tables, 15, 131, *134*.
Medical School Undertaking, *45*, *53*, 158, *159*, 160, *161*.
Memorial Hall and Sanders Theatre, *92*.
**Merriam, C.**, 80, 126.
**Merrick** (*S.*), 77, 104, *113*.
**Mills, A.** (*Be.*), 78, 106.
Mineralogy and Petrography, 111, *119*.
Mining Camp, $35^{14}$, 109, 111, *117*.
Mining and Metallurgy, 30, *117*.
**Minot, C.** (*B.*), 79, 123, *124*.
**Morey** (*S.*), 77, 104, *113*.
**Morgan, H. T.**, 71, 124.
**Moseley, W. O.** (*P.*), 84, 132.
**Mowlson, Lady** (*S.*), 77, 104, *113*.
**Munroe** (*Be.*), 78, 106, *115*.
**Munson, I.**, 71, 90.
Museum of Comparative Zoölogy, 25, *47*, *117*, 162.
Funds, 82.
Tables, 18, *41*, 145, *145*.
**Museum of Comparative Zoölogy** (balance), 82, 145.
**Music Department**, $35^{5}$, 73, $108^{2}$, *117*.
Neuropathology, $36^{2}$.
**New Endowment** (*D.*), 80.
**Newgate, J.**, 73, 100.
**New Subscription** (*M.*), 84, 132.
**Newsboys', Boston** (*S.*), 25, 29, 54, 77, 100, 104, *113*.
**Nichols, H. G.** (*S.*), 77, 104, *113*.
**Nichols, L.**, 84, 132.
**Noble, W. B.**, 73, 101.
Normal Scholarships, *114*.
**Norton, C. E.** (*B.*), 79, 123, *124*.
**Norton, C. E.** (*F.*), 66, 75, 102, *112*.
**Nourse, H. S.**, *53*, 65, 71, 90, 157, *158*.

Observatory, $37^{3}$, *47*, 162.
Funds, 85, 86.
Tables, 18, 143, *144*.
**Observatory Endowment**, 86, 143.
Office Expenses, *91*.
**Oliver, J. P.** (*S.*), 85, 133, *135*.
**Osgood, L.** (*B.*), 79, 123, *124*.
**Osgood, L.** (*S.*), 77, 104, *114*.
**Osgood, M.** (*B.*), 79, 123, *124*.
Other Funds for Special Purposes, 86.
Overseers' Expenses, *91*.

**Paine** (*P.*), 86, 143.
**Paine, Robert Treat** (*F.*), 75, 102, *112*.
**Paine, Robert Treat** (*O.*), 86, 143.
**Paine, Robert Troup**, 69, 87, 157.
**Palestine** (Excavations), 32, *49*, 88, 148, *148*.
**Palfrey Exhibition** (*Be.*), 78, 106, *115*.
**Parker, F. E.**, 65, 71, 90.
**Parker, J.** (*F.*), 75, 102, *112*.
**Parkman** (*P.*), 80, 126.
**Parkman, F.** (*F.*), 75, 102, *112*.
**Parkman Memorial, Francis** (*B.*), 25, 54, *57*, 68, 79, 122, 123.
Pathology, Department of, $36^{2}$.
Gift (balance), 84.
**Pathological Laboratory**, 84, 158, *159*.
**Peabody** (*P.*), *47*, 69, 83, 146.
**Peabody, A. P.**, Memorial (*Be.*), 78, 106, *115*.
**Peabody Building**, 69, 83, 146.
**Peabody Collection**, 69, 83, 146.
**Peabody, F. G.**, 73, 101, 108, *116*.
**Peabody, G. F.** (*S.*), 66, 77, 104, *114*.

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Peabody Museum of American Archaeology and Ethnology, 37[5], 38[5], 64, *41*, *47*, *92*, *160*, 162.
South American Expedition, 38[2], 83, 147, *147*.
Funds, 83.
Tables, 19, 146, *147*.
Peirce, D. H., 73, 101.
Pennoyer (*S.*), 77, 104, *114*.
Perkins (*P.*), 73, 101.
Perkins, R. A. (*S.*), 77, 104, *114*.
Perkins, W., 71, 90.
Permanent, 82, 145.
Permanent Tutors, 72, 101.
Peters, E. D. (*S.*), 80, 82, 104, *114*.
Philadelphia (*S.*), 77, 104, *114*.
Phillips, E. B., 86, 143.
Phillips, J., 73, 102.
Phillips, J. (*Eliot P.*), 66, 72, 100.
Phillips, W., Memorial (*S.*), 77, 105, *114*.
Philosophical Library, 31, 75, 108, *117*.
Physical Laboratory, 73, 151.
Physical Research, 28, 52, 75, 151, *152*.
Pierce, H. L., 71, 90, 124, *125*.
Pierce, H. L. (Residuary), 6, 65, 71, 124, 145.
Pierce, H. L. (Residuary) (*M.*), 84, 132, *160*, *161*.
Plantation of Shrubs, 75, 109.
Plummer (*P.*), 74, 101.
Political Economy, see Economics.
Political Economy, Lectures on, 73, 101.
Pomroy, W. (*Be.*), 81, 127, *128*.
Pope (*P.*), 74, 101.
Porter, C. B. (*S.*), 85, 133, *135*.
Potter, S. E., Endowment, 24, 54, 56, *57*, 67, 74, 142[2], *161*.
Premium on Bonds, Repayments, 6, 58.
President's, 71, 90.
Prichard, W. M., 86, 150, *150*.
Printing Office, *120*.
Prizes:
Funds, 78, 79, 85.
Receipts, 28, 133.
Payments, *41*, *43*, *45*, *115*, *116*, *135*.
Proctor, 84, 133, *135*.
Public Buildings (*C.*), *41*, *119*.
Psychological Laboratory (*B.*), 31, 108, *117*.
Quinby, J. W., 80, 126, *127*.
Quincy, J., 86, 143, *144*.
Randall Hall Association, 58, *59*, 64.
Randall, J. W., 86, 150, *150*.
Randall, J. W. and B. L., 86, 154.
Rate of dividing income, 6.
Receipts and Disbursements, General Statement, 40–58, *41–59*.
Reed, W. (*S.*), 67, 77, 105, *114*.
Religious Services, 72, 153.
Repayments, 91[2], 111.
Retiring Allowances, 9, 27, *41*, *43*, 71, 90, *92*, *136*.
Revere, Paul (Engraving), 31[7], 123, *125*.
Ricardo Prize (*S.*), 28, 77, 105, *114*.
Richmond, A. C., 80, 127.
Riverside, 54, *57*, 65, 71, 90.
Robinson, N., Jr., 74, 101, 102, 108, *112*, *116*.
Robinson, N., Jr., Additional, 67, 74, 101, 108, *116*.
Robinson, N., Jr., Hall, 35[2], 109, *116*, *117*.
Rockefeller, J. D., 84, 132.
Rodger (*S.*), 77, 105.
Rogers (*F.*), 75, 102, *112*.
Rogers, Ezekiel, 74, 100.
Rogers, H. B. (*S.*), 77, 105, *114*.
Rogers, H. B., Memorial (*F.*), 75, 102, 112.
Ropes, Mary P. (*P.*), 24, 54, 56, *57*, 67, 74, 100, 101.
Rotch, A., 82, 101.
Royall (*P.*), 81, 130.
Rumford (*P.*), 74, 101.
Ruppaner, Dr., 84, 132.
Russell, Daniel, 74, 100.
Russell, E. (*S.*), 77, 105, *114*.
Russell, J. L. (Botanic Garden and Gray Herbarium), 74, 141, 142.
Russell, J. L. (*D.*), 80, 127.
Russell, J. L. (*U.*), 71, 90.
Salaries, Gifts for, 26, 27[3], 28, 35[2], 36[2], 38[2], 75, 102.
Salaries, Payments, *41*[3], *43*[4], *45*[2], *47*[4], *49*[2], *51*[2], *92*, *118*, *119*, *125*, *128*, *130*, *136*, *138*, *139*, *140*, *142*, *144*, *145*, *147*, *148*, *150*, *155*.
Sales (Receipts), 52[6], 91[2], 108[2], 111[10], 123, 124[3], 127[3], 130, 134, 137[2], 139, 140, 141, 142, 143, 144[2], 149, 150, 152.

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**Sales** (*Pr.*), 79, 107, *115*.
**Sales** (*S.*), 77, 105, *114*.
**Sales, F.** (*B.*), 79, 123, *125*, *160*.
**Salisbury** (*B.*), 79, 123, *125*.
**Salisbury, S.**, 79, 124
**Saltonstall** (*S.*), 77, 105, *114*.
**Saltonstall, G.**, 74, 101.
**Saltonstall, L.** (*S.*), 77, 105, *114*.
**Saltonstall, M.** (*S.*), 77, 105, *114*.
**Sanskrit Department**, 75, 108.
**Sargent, J. O.** (*Pr.*), 79, 107, *116*.
**Savage, J.** (*S.*, *L.*, *O.*), 87, 105, *114*, 124, 143.
**Sawin, G. W.**, 74, 108.
**Sayles, R. W.** (*C.*), 74, 108, *116*.
Scholarships:
Funds, 75, 85.
Receipts, 25[4], 26[2], 29[7], 30, 103, 104, 105, 129, 132, 133, 147, 157.
Payments, *7*, *41*, *43*[2], *45*, *47*, *112*, *113*, *114*, *130*, *134*, *135*, *145*, *147*, *158*.
**Scholarship and Beneficiary Money Returned** (*Be.*), 28[5], 78, 106, *115*.
**Scholarship Money Returned** (Law), 80, 81, 130, *130*.
**School of Comparative Medicine**, 84, 133.
**Schurz, H., Memorial Free Bed**, 87, 156.
**Searle, M. R.**, 71, 150, *150*.
**Sears, D.** (*O.*), 86, 143.
**Sears, H. F.**, 84, 132, *135*.
**Semitic Building**, 87.
**Semitic Collection**, 87, 148, *148*.
**Semitic Library**, 75, 108, *117*.
Semitic Museum, *41*, *49*, *92*, 162.
Tables, 19, 148, *148*.
**Sever** (*B.*), 79, 123, *125*, *160*.
**Sever** (*S.*), 77, 105, *114*.
**Sewall** (*S.*), 77, 105, *114*.
**Sewall, J.** (*Be.*), 78, 106.
**Shaler Memorial**, 24, 35, 54, 82, 100, 108, *116*.
Shaler Memorial Tablet, 35, 109.
**Shapleigh, S.** (*B.*), 79, 123, *125*, 159.
**Shattuck** (*S.*), 77, 105, *114*.
**Shattuck, G. C.** (*P.*), 68, 84, 132.
**Shattuck, G. C., Memorial** (*F.*), 84, 132, *134*.
**Shepard, R. H.**, 86, 154.
**Shepard, R. H.** (Memorial), 86, 154.
**Simpkins, J., Laboratories**, 87.
**Skillen Memorial**, 53, 84, 157, *158*.
**Skinner, F.**, 32, 86, 140.
**Slade** (*S.*), 77, 105, *114*.
**Smith** (*P.*), 74, 101.
**Smith, D.** (*S.*), 67, 77, 105, *114*.
**Smith, G.**, *53*, 69, 87, 157, 158, *158*.
**Social Ethics** (Furnishings for the Department of), 75, 109, *117*.
Social Ethics, Study of, 35, 109, *117*, *119*.
Society for Promoting Theological Education, 31, 127.
**Social Workers, School for**, 35, 74, 109, *117*.
**Sohier, G. B.** (*B.*), 79, 123, *125*.
**Sohier, G. B.** (*Pr.*), 79, 107, *116*.
Soldier's Field, The; Improvement and Additions, 38, 158, *159*, *160*.
South American Expedition, 38[2], 88, 147, *147*.
**South End House** (*F.*), 29[4], 75, 102, *112*.
South End House Fellowship in Social Education, 29, 102, *112*.
**Spackman, W. M.**, 74, 102.
**Spooner, W. B.**, 80, 127.
Squam Lake Camp, 52, 111[2].
Stadium, *53*, *159*, *160*.
**Stickney, J.**, 74, 101.
**Stillman, J.** (*P.*), 84, 132.
**Stillman Infirmary** (balance), 87, 156.
**Stillman Infirmary Gift** (balance), 87, 156.
Stillman Infirmary, 50, *51*, *64*, 159, 162.
Funds, 87.
Tables, 22, 156, *156*.
**Story** (*S.*), 77, 105, *114*.
**Story, A.**, 86, 143.
**Stoughton** (*S.*), 52, *53*, 67, 77, 105, 157, *158*.
**Strong, C. P.** (*S.*), 85, 133, *135*.
Students, Receipts from, 48, 50, 109, 127, 130, 134, 137, 139, 156.
**Sturgis Fund** (*O.*), 52, 144.
**Subscription for Library** (*B.*), 79, 123, *125*.
**Sugar Cane Investigations**, 75, 141, *141*.
Summaries:
Investments and Income, 6, 10.
Tables, 162.
Summer Schools, 34, *41*, 50, 52, 109, *118*.
**Summer School Mining Camp**, 52, 75, 109, *117*.

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**Sumner, C.** (*B.*), 79, 123, *125*.
**Sumner, C.** (*Pr.*), 79, 107.
Sundry Accounts.
Table, 159, *160*, 162.
**Sundry Balances** (Sundry Funds), 88.
**Sundry Gifts** (balances), 75, 84, *135*.
**Sundry Gifts for books** (balances), 80.
**Sundry Gifts for services** (balances), 80.
Sundry Funds, 87.
Sundry Funds for Special Purposes, 86, 107, *116*, 133, *135*.
Table, 157, *157*, 162.
**Surgical Laboratory**, 84, 133, *135*.
Surgical Laboratory, 36.
**Sweetser, I.** (*M.*, *S.*), 85, 133, *135*.
**Sweetser, I.** (*U.*), 71, 90.
**Swett, M. W.**, 84, 132.
**Swett, S. W.**, 84, 132.
**Swift** (*S.*), 77, 105.

Tables:
Appleton Chapel, 21, 153, *153*.
Arnold Arboretum, 16, 140, *140*.
Botanic Garden and Botanical Museum, 17, 141, *141*.
Phillips Brooks House, 21, 154, *154*.
Bussey Institution, 16, 139, *139*.
Changes in the Funds, 11.
College, 12, 100, *111*.
Construction Accounts, 158, *159*.
Dental School, 15, 137, *138*.
Divinity School, 14, 126, *127*.
Fogg Art Museum, 20, 150, *150*.
Funds and Balances, 71.
Germanic Museum, 20, 149, *149*.
Gray Herbarium, 17, 142, *142*.
Hemenway Gymnasium, 22, 155, *155*.
Jefferson Physical Laboratory, 20, 151, *152*.
Law School, 14, 129, *130*.
Library, 13, 122, *124*.
Medical School, 15, 131, *134*.
Medical School Undertaking, 158, *159*.
Museum of Comparative Zoölogy, 18, 145, *145*.
Observatory, 18, 143, *144*.
Peabody Museum, etc., 19, 146, *147*.
Semitic Museum, 19, 148, *148*.
Stillman Infirmary, 22, 156, *156*.
Summary, balanced, 162.
Sundry Accounts, 159, *160*.
Sundry Funds for Special Purposes, 157, *157*.
University, 12, 90, *91*.
**Taylor, J. T.** (*S.*), 85, 133, *135*.
**Taylor, K. M.** (*B.*), 80, 123, *125*.
**Teachers' and Pupils'**, 82, 145.
**Teachers' Endowment**, 23, 27, 54, 67, 74, 100, 101.
Term-bills charged off, 7.
**Thaw** (*F.*), 69, 83, 146, *147*.
**Thayer** (*S.*), 77, 105, *114*.
**Thayer, A. W.** (*Be.*), *53*, 78, 106, 157, *158*.
**Thayer, J. E.**, 74, 108, *116*.
Theory and Practice, Anonymous Fund in the Department of, 83, 131.
**Thomas, G.** (*S.*), 77, 105, *114*.
**Thorndike, W. H.** (*Pr.*), 85, 133.
**Tileston, T.**, 80, 127.
**Toppan** (*S.*), 77, 105, *114*.
**Toppan, R. N.** (*Pr.*), 79, 107, *116*.
**Torrey, E.**, 74, 108, 116.
**Torrey, H. W.**, 74, 108.
**Townsend** (*S.*), 77, 105, *114*.
**Townsend, M. P.**, 81, 127.
**Treadwell, D.**, 80, 123, 124, *125*.
**Tucker, I.** (*B.*), 68, 80, 123, *125*.
**Tufts, Q.** (*Be.*), 78, 106, *115*.
**Tufts, Q.** (*M.*), 84, 132.
**Turner, S.**, 71, 90.
**Tyndall, J.** (*F.*), 75, 103, *112*.

University, *41*, 162.
Funds, 71.
Scholarships, *114*[a].
Tables, 12, 90, *91*.
University charge, 5, 6, 89, 96.
**Unknown Memorial**, 74, 101, 108, *116*.
**Unrestricted Gift, Germanic Mus.**, 83, *149*.

**Villard, H.**, 65, 74, 101.

**Wadsworth, B.** (*Be.*), 78, 107.
**Walcott** (*S.*), 77, 105, *114*.
**Walcott, H. P.**, 87, 156.
**Wales** (*P.*), 67, 74, 102, *125*.
**Wales, H. W.** (*B.*), 80, *125*.
**Walker, J.** (*B.*), 80, 123, *125*.

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**Walker, J.** (*F.*), 75, 103, *112*.
**Ward, S.**, 67, 74, 108, *116*.
**Ward, T. W.** (*B.*), 80, 123, *125*.
**Ward, W.**, 81, 127.
**Ware, C. E., Memorial** (*F.*), 85, 132, *134*.
**Ware, J., Memorial** (*F.*), 85, 132, *134*.
**Warren** (Anatomical Museum), 36, *45*, 84, 133, *135*, *136*.
**Warren, C. M.**, 74, 108, *116*.
**Warren, H. C.** (*C.*), 74, 102, 108, *116*.
**Warren, H. C.** (Dental School), 85, 137.
**Warren, H. C.** (Exploration), 83, 146, *147*.
**Warren, S. C.**, 83, 146.
**Washburn, P.** (*Pr.*), 79, 107, *116*.
**Waterhouse, S.**, 74, 102.
**Weld** (*P.*), 81, 130.
**Weld, C. M.** (*S.*), 77, 105, *114*.
**Weld, W. F.**, 65, 71, 90.
**Weld Memorial, William Fletcher**, 30.
**Wells, D. A.** (*P.*, *Pr.*), 79, 102, 108.
**Wendell, J.** (*S.*), 77, 105, *114*.
**Wheeler, I. S.**, 74, 153.
**Wheeler, S. W.** (*Be.*), 82, 107.
**Wheelock, J.**, 25, 54, 74, 100, 102.
**Whiting** (*F.*), 75, 103, *112*.
**Whiting** (*S.*), 77, 105, *114*.
**Whitney, J. D.** (*S.*), 77, 105, *114*.
**Whitney, Maria**, 25, 54, *57*, 68, 82, 145[2].
**Whitney, M. L.** (*S.*), 52, 77, 105, *114*.
**Wigglesworth, E.** (*P.*), 84, 132, *135*.
**Wigglesworth, E.** (*S.*), 85, 133, *135*.
**Wilder, C.**, *53*, 84, 157, *158*.
**William, Emperor**, 24, 54, 82, 149[2].
**Williams, D.**, *53*, 88, 157, *158*.
**Williams, H. W.** (*P.*), 84, 132.
**Willard** (*S.*), 77, 105.
**Winn** (*P.*), 81, 127.
**Winslow, S.**, *53*, 88, 91, 157, *158*.
**Winthrop, R. C.** (*S.*), 83, 147, *147*.
**Wolcott, H. F.**, 83, 147, *147*.
**Wolcott, J. H.** (*B.*), 80, 123, *125*.
**Woodland Hill**, *53*, 69, 86, 157, *158*.
**Wright, C.**, 74, 108.
**Wright, E.**, 80, 124.
**Wyman, C.** (*S.*), 77, 105, *114*.

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